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ATTRIBUTION THEORY AND INFORMATION SEARCH:

A STUDY IN A NATURAL SETTING

by

Ⓒ John L. Evans

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ABSTRACT

The research reported here is concerned with attributions and their information base. Attribution theory and research have, for the most part, neglected questions of information search in attributional processes. The present study investigated these questions in a natural setting. The research allowed us to examine the applicability of attribution theory for the natural setting, to develop methods for the study of attributions in natural settings, to provide further test of the theoretical framework of attribution theory, and to suggest refinements of some of the concepts of attribution theory.

The results indicate that, at least for the setting studied, information search is fundamental. When information search is considered, the current formulations of attribution theory provide insights for our understanding of attributional processes. A central finding was that those studied typically engaged in extensive information search in order to construct the stimulus. This constructive process is extensively discussed and hypotheses are suggested for future investigation. It is further suggested that much is to be gained by the cross-fertilization of attribution theory and interpretive sociology.

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CHAPTER I

ATTRIBUTION THEORY AND INFORMATION SEARCH

Introduction

Attribution theory comprises a set of loosely organized general principles explaining how causal judgements are made. The stress is on what Heider called "naive psychology"--that is, the theories that "everyman" uses to comprehend his world. As such, attribution theory deals with processes of inference and attribution in everyday life, covering the variety of social situations. Thus the theory should explain attributions made in meeting a new date, in diagnosing a patient, in interviewing an inmate up for parole, and so on.

With this focus, attribution theory has the potential of contributing to our understanding of many of the classic questions of social psychology. For example, inference and attribution are basic to social interaction. An adequate account of attributional processes would therefore be helpful in our attempts to understand social interaction.

Symbolic interactionists, labelling theorists, ethnomethodologists, and other "interpretive" (Wilson, 1970) sociologists have been concerned with how actors construct and understand their interactions in everyday life. All of these approaches begin with the following assumption:

> . . . that men can comment on their own behaviour, that they can make indications to themselves, that they can construct alternative behaviours in given situations.
>
> (Brittan, 1973:11)

It was our general concern with this interpretive process which stimulated and maintained our interest in attribution theory. Attributional processes are central.

> They compel our attention . . . because they are critical both for understanding interaction and for explaining the process by which people come to acquire situational and personal identities.
>
> (Alexander and Epstein, 1969:382)

Social psychologists of whatever persuasion agree that interaction is fundamental human behaviour. Basic to interaction is attribution.[1]

Attribution Theory

The large volume of work in this area was stimulated by Heider (1944, 1946, 1958). Following Heider, Jones and Davis (1965), and Kelley (1967) provided theoretical statements systematizing aspects of Heider's thinking. Reviews of these early theoretical statements are available elsewhere (Tagiuri, 1969, Hastorf *et al.*,

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[1] A discussion of the implications of attribution theory for specific perspectives within the interpretive paradigm is presented in the final chapter.

1970).[2]

More recently, Kelley has published a number of papers (1971, 1972a, 1972b, 1973) synthesizing and extending earlier work. These developments have recently stimulated much research activity; however, the questions are complex and their investigation is just underway.

This dissertation addresses itself to a major theoretical and methodological difficulty encountered by this research. More specifically, by virtually ignoring processes of information search in attribution, and by an over-reliance on a constricting laboratory research paradigm, critical issues in the study of attribution have been neglected. This dissertation reports research which confronts these issues.

Kelley[3] conceptualizes attributional processes in terms of the patterning of information along dimensions of distinctiveness, consistency, and consenses.

An example will help to clarify his conceptualization. Let us take the case of a man reacting with obvious relish to a bikini-clad woman. He may assume that his reaction is occasioned either by some property(ies) of his own, or by some property(ies) of the woman, or by some combination of the two. How does he go about sorting out the effects due to each of these possibilities? According to Kelley's model he would ascertain the source of his enjoyment in light of ". . . subsidiary information from experiment-like variations of conditions" (1967:194). Thus, if he is confidently to attribute his reaction predominantly to some characteristic of the object then the following conditions should hold:

---

[2] See especially the bibliography in Hastorf _et al_. (1970).

[3] Since Kelley's work (1967, 1972a, 1972b, 1973) has stimulated by far the most research and since his model incorporates other contributions, he is considered the central attributional theorist.

1. He must feel that his response is associated "distinctively" with this bikini-clad woman. The same reaction should not occur in response to just "any" woman similarly attired.

2. He must feel that his response would be much the same on other occasions with the same stimulus (consistency).

3. He must believe that other men would react in much the same fashion to this bikini-wearing woman (consensus).

An important assumption underlying this model is that, where necessary, the individual will seek information which will enable him to make causal attributions. Unfortunately, we do not know the conditions which instigate information search. We do not know what kinds of information are sought under which conditions.

The argument presented here is that such knowledge is basic to the development of attribution theory. In its absence, attribution theory is seriously limited in scope.[4] It is applicable only to cases where information is controlled or where we can safely assume that additional information is not sought. However, in most situations this is a dangerous assumption; a wide variety of potential sources of information is always available. Whether or not these sources are used depends upon processes of information search whose nature remains unknown.

The Research Paradigm

Although Kelley has emphasized the processing of information once it is acquired, he is aware of the importance of information search and has recently argued (1973:119) for its investigation. Unfortunately, the current research paradigm for attribution studies is ill-suited to the task. This paradigm is nicely illustrated by McArthur's (1972) study. In order to investigate a number of aspects of Kelley's model, she constructed a situation which allowed her to vary the kinds of information subjects received when making a causal attribution concerning a reported response of another person. More specifically, subjects were given written descriptions of others' responses.[5] Control subjects were asked to make a causal attribution with no additional information deliberately supplied by the researcher; experimental subjects were given some combination of the kinds of information specified in Kelley's model (distinctiveness, consistency, consensus).

---

[4] Kelley is aware of the importance of information search but has not systematically incorporated such considerations into his model. Similarly, Jones and Thibaut (1958:160-162) have considered the importance of information and information search in interaction.

For our purposes, the difficulty with this paradigm is precisely that the researchers control the information provided to the subjects, and ignore the information subjects bring with them and other search activities in the experimental setting.[6] No opportunity for information search is allowed. Under these conditions, results cannot be generalized to situations which allow the possibility of information search.

Study Design

While one is reluctant to lose the convenience of the experimental situation, it seems obvious that we must know more about the sources and kinds of information sought before laboratory investigations of these questions will be fruitful. At this stage, then, research appropriate to the investigation of information search would examine attributional processes occurring in natural settings.

---

[5] Examples are: "John laughs at the comedian." "Sue is afraid of the dog."

[6] Alexander and Epstein (1969) likewise contend that the current research paradigm fails to consider the complexity and variety of variables in attributional processes. Although they do not explicitly address the question of information search, they find the current research paradigm constricting on other grounds.

Several studies have investigated some aspects of information search in decision making. For the most part, they have sought to investigate the conditions affecting the amount of information sought in decision tasks where information could be relatively easily quantified (e.g., Lanzetta and Kanareff, 1962; Driscoll and Lanzetta, 1964; Nidorf and Crockett, 1964; Barefoot and Straub, 1971; Crawford and Haaland, 1972; Heslin *et al*., 1972). Their focus has not been on types of information sought. Further, the types of information which subjects were allowed to seek were severely restricted in these studies.

Our central argument has been that there are sound theoretical reasons for skepticism regarding the scope of attribution theory--a formulation of attribution theory which, for the most part, is based on work done in the laboratory setting. Can attribution theory, developed without explicit concern for information search, handle data from settings in which information search is not restricted? We do not adopt the position that either laboratory or field provides the preferred setting for the study of attribution. We are not at all disposed to enter the entirely fruitless polemic over field versus laboratory procedures. Rather, we argue that the field setting best allows us to explore our present theoretical concern with information search in attributional processes. Radloff (1970) in his review of Lucas' (1969) field study presents our position clearly:

> . . . the attempt to have one's cake and eat it, too, to achieve the advantages of the laboratory in the field (or vice versa), seems doomed to failure. It is fortunate . . . that there is no necessity to continue to attempt the impossible. Laboratory and field studies can and must be unified on a conceptual level. We cannot generalize specific behaviors from laboratory to the field. The analysis must proceed thus--Laboratory results <—> Concepts <—> Field results.
>
> (Radloff, 1970:672)

Through an examination of information search in a setting in which neither information nor information search are restricted by the researcher, we hope to isolate variables which may then be further explored ~~in~~ both laboratory and field.

A setting which is nearly ideal for our purposes is provided by correctional facilities. Here, in addition to the attributional processes basic to interaction, the staff is formally charged with making attributions. Diagnosis, treatment recommendations, decisions as to punishment, and so on, all depend, in part, on attributional processes.

This study reports research carried out in such a setting. The research investigated attributions made by correctional officers about the inmates in a training school (a correctional facility for juveniles). The details of the research design and setting are discussed in Chapter Two; the hypotheses or research questions which focused the investigation are discussed below.

Research Questions

A proposition central to Kelley's model holds that information must have qualities of distinctiveness, consistency, and consensus before attributions can be made confidently. By combining this proposition with the information search assumptions implicit in attribution theory, we can hypothesize that attributors will seek or assume distinctiveness, consistency, and consensus in information.[7]

It is necessary to include the phrase "or assume" in this hypothesis since attributions can be based not only on overtly sought information, but also on information assumed to exist (Pines, 1973). For example, one officer in the Training School explained that "these boys" were rude because they were never taught any manners at home. When asked whether that was true of all the boys, he replied that "if they had had proper homes they wouldn't be here." Here, the officer's assumption of a common home environment suggests that he would make a variety of attributions without overtly seeking further information.

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[7] This hypothesis takes the motivation to make a confident attribution as given. Obviously this demands a research focus which allows some control of motivational factors. See p. 16.

It is worth noting that in the usual attribution study this problem has been ignored; studies have been conducted as if the information given the subjects is all the information they have. While it is true that there is usually some speculation as to how the information is processed, no study takes into account the information the subject brings to the task. We suggest that this is likely even when the experimenter assumes that he is using a situation unfamiliar to his subjects. For example, an individual asked to make attributions in an experimental setting may assume he is expected to make decisions and act on the basis of limited information. On the other hand, he may search his memory, the setting itself, and perhaps even the experimenter for cues to enable him to define his task.

In view of the obvious importance of assumed information to attribution the neglect is difficult to understand--except that the measurement of assumed information presents difficult methodological problems. We take the position that some data, even if incomplete, are better than no data at all. Data on assumed information will not only allow a stronger test of some of the hypotheses in this study, it will allow further investigations to address questions such as the following: In what ways, if any, does the reprocessing of information assumed to exist differ from the processing of "new" information; Under what conditions does information assumed to exist not suffice for making attributions?

As a corollary to the first hypothesis, we expect that confident attributions will be made where information of high distinctiveness, high consistency, and high consensus is obtained (or is assumed to exist).

Now, while we have hypothesized that attributors will seek certain kinds of information and will make confident attributions given a specified pattern of information, we recognize that the full analysis implied by Kelley's model is not always carried out. A whole new analysis will seldom be necessary: similar cases will have been analyzed before and beliefs will have been established concerning the functioning of causal factors. These beliefs are causal schemata for Kelley who defines them as "an assumed pattern of data in a complete analysis of variance framework" (1972b:15). As Kelley (1973:121) has emphasized, "one major task for attribution theory is to specify when a given schema is evoked."

The complexity of such schemata is limited only by the ingenuity of the attributor; however, on the evidence (e.g., DeSoto, 1961; Chapman and Chapman, 1967, 1969), it seems that most people prefer simple schemata: schemata which link one class of causes to one class of effects. For example, Kelley suggests that "there may be a tendency for the attributor to prefer simple[8] schemata over complex ones" (Kelley, 1973:121). These simple schemata are conceptualized as "essentially single-cause patterns, all the variations in effect being associated with variations in one cause or one type of cause." Many attribution theorists go further to suggest that a judgement of internal causality tends to dominate (e.g., Jones and Nisbett, 1971). For example, Heider argues that "behavior . . . tends to engulf the total field" (1958:54). And Kelley believes that "personal properties are inferred directly from behavior without its being interpreted in relation to the situation in which it occurs" (Kelley, 1973:121).

---

[8] Kelley sometimes uses "multiple sufficient cause schemata" and "simple causal schemata" interchangeably to denote schemata in which all the variation in effect is assumed by the attributor to be attributable to variation in one cause or one type of cause.

Against these beliefs many experiments have found that attributors make frequent use of multiple cause schemata. Kelley suggests that these findings may be an artifact of the experimental situation. That is, the experimental situation may be one "in which the subject's subtlety and sophistication as an attributor are under evaluation" (Kelley, 1973:122). However, this is not the case for most attributions made in everyday situations.[9]

From these arguments the following hypothesis can be proposed: Attributors will tend to rely most heavily on attributions of internal causality.

The hypothesis can also be proposed that multiple cause schemata will tend to be invoked when the internal cause is judged to be weak. This qualifies the hypothesis offered above to the effect that simple schemata involving internal causation tend to be dominant. We expect that this tendency will be found and that exceptions to it will tend to be characterized by judgements of weak internal causation.

---

[9] Of course many attributional tasks in the Training School are made in situations in which the attributor may be concerned about others' evaluations of his attributions. This is often true, for example, of attributions made by the social worker and the psychologist, who are, in a sense, professional attributors. This presents no difficulty in the present study since we concentrate on attributions made by correctional officers. The correctional officers feel that they are evaluated in terms of the order that they keep rather than on the attributions that they make.

This last hypothesis introduces the fact that attributors attend to variations in strength among causes. They also attend to variations in strength among effects. On present evidence we can hypothesize, with Kelley, that "the more extreme the effect to be attributed, the more likely the attributor is to assume that it entails multiple necessary causes" (Kelley, 1972b:156). For example, in the pre-test the explanation offered for the escape of one boy involved not only attributions concerning his personal characteristics but also attributions concerning his relations with others in the institution. Both factors were held to be necessary to explain the escape. It is conceivable that less serious effects produced by the same boy would be explained by reference to personal characteristics alone.

Thus, as we have just seen, the assumption of one causal schema as against another will have implications for information search. The schemata provide the attributor with hypotheses and, as such, should guide his information search activities. Therefore, we can hypothesize that the assumption of a simple causal schema will result in simple information search activities; the assumption of a multiple cause schema will result in multiple information search activities. For example, in the escape incident mentioned above, the assumption of a multiple cause schema meant that information concerning the boy's personal characteristics was reviewed and inquiries were made regarding unusual features of his present situation.

Summary of Hypotheses

1. Attributors will seek or assume distinctiveness, consistency, and consensus in information.
2. Confident attributions will be made where information of high distinctiveness, high consistency, and high consensus is obtained (or is assumed to exist).
3. Attributors will tend to rely most heavily on attributions of internal causality.
4. Multiple causal schemata will tend to be invoked when the internal cause is judged to be weak.
5. "The more extreme the effect to be attributed, the more likely the attributor is to assume that it entails multiple necessary causes" (Kelley, 1972b:156).
6. The assumption of a simple causal schema will result in simple overt information search activities; the assumption of a multiple cause schema will result in multiple overt information search activities.

CHAPTER II

RESEARCH METHODS

Introduction

Data to test the hypotheses presented in Chapter One were collected primarily through interviews with the correctional officers at the Training School, and through observation of their activities. In addition three informants provided access to otherwise unavailable information and allowed an independent check of some of the data gathered from the correctional officers.

For our purposes, the chief advantage of the research setting lies in the freedom subjects have to seek information and make attributions independently of the researcher's instructions and restrictions. The research therefore focused on naturally occurring attributions. In particular this involved following up (as detailed below) "incidents," that is, those events which the correctional officers felt required their special attention. This focus allowed us to assume that there would be at least some motivation to make confident attributions.

Each of the four dormitories in the institution is under the direction of one or two officers per shift. The officers are required to fill out "incident reports" in which they briefly describe any event requiring special attention, together with the action they take. The researcher had access to these incident reports which provided a fairly complete listing of the officers' major decisions. In addition the researcher had established sufficient rapport with the officers to have been informed of incidents which "should" have been reported but were not since the action taken might not have been approved. Incidents reported by the officers include such diverse activities as a boy's unusual quietness, homosexual rape, and escape.

Research Setting

The Training School is a correctional institution under the jurisdiction of the Department of Justice. It houses from 25 to 60 boys between the ages of 12 and 16. Most of the boys are sentenced under the Juvenile Delinquents Act, although a small number are wards of the court.

The institution is organized into a dormitory system. Each dormitory is presided over by a correctional officer who is given the title "Unit Co-ordinator." He is responsible for co-ordinating the activities of the three officers (including himself) who man the various shifts. During the period of the research three dormitories were operating. There were, therefore, nine full-time correctional officers as well as several officers who were called on from time to time as replacements. In addition to the Unit Co-ordinators there is a "Floor Co-ordinator" who is responsible during any one shift for co-ordinating the activities of all of the dormitories. The Floor Co-ordinator also is available to deal with any especially difficult problems or to advise any officer. The ranking Floor Co-ordinator is directly responsible to the Superintendent of the institution. Other personnel include teachers, treatment staff (consisting of a social worker, a psychometrist, and a nurse), and service personnel.

The correctional officers came from varied backgrounds. Six of them had become correctional officers immediately upon graduating from university. Two others were working on university degrees. Five of the correctional officers had joined the Training School staff following military service. The remaining two officers had had checkered careers following high school graduation.

Most of the inmates attend classes during regular school hours. When the boys are not in school, or with the recreation director or treatment staff, they are the responsibility of the dormitory officer. This means that for the greater part of each day the boys are in the charge of the officers.

While the theoretical focus of the present research is on attributions in general, it is based in a particular natural setting. The general theoretical issues raised, however, must be informed by data from a variety of settings. The collection of such data, then, demands replication. After Galtung (1967), we suggest that the necessary replication is of two kinds: internal and external. Internal replication would provide a test of the applicability of our findings for like settings; external replication would allow an assessment of the generalizability of these findings.[1] In order to facilitate the selection of appropriate settings for both internal and external replication, it is necessary to describe some of the unique features of the present setting.

The Training School is a correctional institution. This means, among other things, that the officers and juveniles have not chosen one another as interaction partners; they have been thrust upon one another. Moreover, the superior status of the officers is officially defined and clearly agreed upon. In addition, it seems likely that these status differences are further consolidated by the adult-child relationships characteristic of the institution. This feature of the correctional setting may affect the generalizability of the findings of this study. As we focus on attributions made by correctional officers about inmates, it may be that the causative factors taken into account may differ from those considered in other settings. For example, the officers may consider their charges to be more easily swayed by external pressures than would be the case for adults.

---

[1] For excellent discussions of the importance of both internal and external replication, see Lipset, Trow, and Coleman (1956:427-432); Merton, Reader, and Kendall (1957:301-305); and Campbell and Stanley (1966).

As well, the interaction goals[2] are fairly explicitly defined in this setting. The officers are expected, above all else, to maintain order, "to keep the boys in line." This of course does not preclude other goals. In particular, the officers often wish to come to "understand" their charges. These goals may operate independently or, as is more often the case, in conjunction, as when an officer feels he must understand a boy for the purpose of more efficient control.

Furthermore, more information is provided or made available to the officers about the boys than is typically the case in everyday interaction. Some kinds of information are likely to be available simply because of the sustained, intensive and extensive interaction characteristic of "total institutions" (Goffman, 1961). As Goffman (1959, 1961) points out, total institutions are characterized by a diminished "backstage"; visibility is high.

---

[2] Jones and Thibault (1958) distinguish among a number of interaction goals: the facilitation of personal goal attainment; the deterministic analysis of personality; and the application of social sanctions. As it is likely that all of these goals are operating in any given interaction, it seems evident that one must distinguish types of interaction in terms of which predominates. The correctional setting can be distinguished from many other natural settings not only by virtue of the predominance of the control goal, but also because it is often the case that personal goal attainment involves the application of social sanctions.

It seems evident that replication must involve not only other total institutions, but also settings which do not manifest these distinctive features.

Mode of Entry

Since one's mode of entry into the field setting can have important consequences for the quality of data collected, it is important that this be handled with care. It has been the experience of numerous field workers (Dean et al., 1967:281) that if one's initial contacts are among those of highest status in the organization then there is generally greater access to various sources of data. For this reason the researcher first gained the support of the Director of Corrections. The Director then contacted the Superintendent of the institution and arranged an initial appointment. The Superintendent was most cooperative. He introduced the researcher to key members of his staff and requested that the researcher be given complete freedom and cooperation. Further, he allowed the researcher access to all files and provided an office and a master key.

Clearly, then, this mode of entry provided a degree of freedom which would have been unlikely otherwise. On the other hand, entry "from the top" may create suspicions among the staff regarding the researcher's relationship with the administration. In fact, this was a consequence of this mode of entry; this problem is discussed below.

A second consideration with respect to entry into the research setting involves techniques for actually gaining the support not only of the initial contacts, but of all of those involved. More specifically, the researcher must portray his study in such a way that it will appear reasonable to those he approaches. The literature gives conflicting advice[3] on how to deal with this problem. These conflicting prescriptions reflect the difficulty in assessing what will be considered reasonable and non-threatening. By a happy accident the researcher began with an account which proved adequate. He explained that he was writing a book on decision making in organizations and that the correctional institution happened to provide an ideal setting. He further assured all those involved that in no way was the study intended as an "exposé" and that complete anonymity was guaranteed. The researcher stressed the fact that the study was not specifically concerned with corrections and, in fact, could have been carried out in other institutions. The aptness of this particular explanation is underscored by the fact that the staff often expressed disdain for and ridiculed the number of "reformist" studies carried out in the institution.

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[3] Dean et al. (1967:282) give conflicting advice within the same article.

Pre-Test

In order to test the hypotheses specified in Chapter One, data were required on a number of variables. To identify operational equivalents and techniques for their measurement, an extensive pre-test was carried out.

Initially, the researcher familiarized himself with the research setting. He observed the staff at work in the dormitories, in counselling sessions, in meetings, in the classrooms, and talked to staff members at all levels of the institution. In addition he gained access to all available documents. It was during this stage that he was able to establish rapport with the officers and obtain the full cooperation, as informants,[4] of three staff members--the ranking correctional officer, the social worker, and the psychologist. The researcher found the informants important at every stage of the inquiry. Zelditch's statement about the use of such a procedure is apt:

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[4] 'Informant' is used in accordance with Zelditch's (1962:569) restricted definition: ". . . namely that he be called an 'informant' only where he is reporting information presumed factually correct about others rather than about himself; and his information about events is about events in their [the researchers'] absence." The usage here is different from that employed by other sociologists (e.g., Denzin, 1970:202).

> Such a procedure is not only legitimate but absolutely necessary to adequate investigation of any complex structure. In studying a social structure . . . there are two problems of bias that override all others. . . . One results from the fact that a single observer cannot be everywhere at the same time, nor can he be "everywhere" in time, for that matter . . . so that, inevitably, something happens that he has not seen, cannot see, or will not see. The second results from the fact that there exist parts of the social structure into which he has not penetrated and probably will not. . . .
> (Zelditch, 1962:572)

To illustrate: in the initial stages of the pretest, many of the more "serious" incidents were not reported to the researcher by the officers, nor were they always entered in the log, supposedly a daily record of incidents. The researcher only became aware of these incidents through his informants. This was particularly important as it sensitized the researcher to the fact that several of the officers viewed his role in the institution with suspicion, despite previous assurance of the researcher's independence from administration. The informants' information, therefore, allowed the researcher to take steps to improve his credibility with the officers. That the officers subsequently provided previously withheld information (including information potentially damaging to them) suggests that these steps were successful.

As well, during this period of familiarization, the researcher was able to penetrate the particular language and argot of the institution's staff. The importance of "learning the language" has been a central element in many critiques of interviewing (Denzin, 1970; Becker and Geer, 1957; Gordon, 1969). As Becker and Geer put it:

> Any social group, to the extent that it is a distinctive social unit, will have to some degree a culture differing from that of other groups, a somewhat different set of common understandings around which interaction is organized, and these differences will find expression in a language whose nuances are peculiar to that group and fully understood only by its members.
> (Becker and Geer, 1957:29)

They argue that the interview technique does not allow the researcher to rectify or even recognize errors of interpretation caused by these language difficulties. It is our contention that this is not so much a critique of interviewing as it is a critique of interviewing as the sole investigative technique.[5]

The issue of language further highlights the importance of informants in the present research. For example, in early pre-test interviews, the terms

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[5] Webb et al. (1966:1) present a similar argument about all research techniques when they are used alone. "No research method is without bias. Interviews and questionnaires must be supplemented by methods testing the same social science variables but having different methodological weaknesses." See also Martin Trow (1957) who comments directly on Becker and Geer's article.

"counselling" and "adjustment center" were frequently used by the officers in describing the action they took in response to a wide range of incidents.[6] Initially the correctional officers were unwilling to expand on these and other terms. However, the officer who served as one of our informants made us aware of the "subtlety" of these terms.

> "That's a couple of things we picked up from the treatment staff. If you yell at a kid, that's 'counselling'; if you give him a little push, that's 'counselling'; counselling means a whole lot of things. If you have to counsel a kid right into the isolation cell, that's the adjustment center."

Finally, then, when the researcher felt "comfortable" (after about six weeks) in the setting and there appeared to be mutual ease in interactions between the researcher and the staff, he began a systematic search for operational equivalents and a specification of techniques. The pre-test allowed the assessment of a variety of techniques to elicit the required data. For example, an attempt was made to use a five point Likert scale to assess confidence of attributions. However, the officers tended to find this non-meaningful and, in addition, the Likert scores tended to fall on the high confidence end. By contrast, much more variability was volunteered in the course of interviews with the officers. Accordingly, the Likert scale was abandoned and the volunteered ratings were employed instead.

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[6] These terms also appear with regularity in the incident log and in "charge sheets." Charge sheets are official incident reports which become part of the boy's file.

During the pre-test an attempt was made to develop a structured interview which directly asked the officers for information on the variables of concern. It became apparent that, in many cases, fixed questions failed to elicit adequate data. For example, initially, the researcher tried asking the respondents what they "knew" about an inmate. Very quickly, he discovered that often the officers regarded such a question as either too general or even meaningless. These respondents simply shrugged or gave general, non-informative answers. On the other hand, the officers freely revealed what they "knew" about an inmate, when they were asked to explain their attributions in a specific situation. That is, when asked such questions as--"Why do you say that about ________?" "How do you know that?"--the officers presented the researcher with "assumed information." In this context, the direct question served as an excellent probe. That is, the question became meaningful to the officers in the context of their discussions about a boy involved in a particular incident. It should be noted that this form of questioning is also truer to the theoretical point: what is required is data on what the officer assumes is relevant to a particular attribution, not a general catalogue of information assumed about an inmate. Attributions are made in context.

For example, one officer offered as part of his explanation of an attribution of "creepiness" that the boy "always does that kind of thing, that's what you expect from him, he acts the same wherever he is." Further, the officer felt that this view of the boy was shared by virtually everyone who knew him.

What evolved, then, as the primary research technique is best described as a "focused interview" (Merton et al., 1956). This is a "semi-standardized interview" in that while the wording of questions is not specified[7] the list of topics to be covered is clearly specified. These topics are based on the issues of theoretical concern. The ordering of the topics and guidelines for specific wording of questions are based on the demands of the research setting (Phillips, 1966: 111). Officers involved in each incident were interviewed. The topics covered in each interview are as follows:

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[7] Lazarsfeld (1954:675-686) has argued that questions must be fixed in their "meaning" to respondents, rather than in their wording. Using appropriate wording is likely to increase reliability and validity. Gordon (1969) was particularly useful in our development of interviewing techniques. See especially his Chapter Five.

1. Information sought

What information is sought with regard to any particular incident? Information which is overtly sought presents no particular difficulty; information search activities such as asking others, the questioning of the participants, reading the files, are all activities which are relatively easily brought out in interview. In addition, the researcher's direct observation and questioning of other officers allowed some check on the validity of the answers given in the interview.

2. Assumed information

As we have already indicated, "assumed information" presents greater methodological difficulties. In order to maximize data on assumed information several different kinds of questions were employed. The officers were asked to explain their attributions, or to indicate how they were able to make such an attribution. In addition, the officers were asked directly what they knew or assumed about a boy. These questions seem to have good face validity: officers made frequent use of such phrases as "everyone knows," "it must be," "of course," etc. It is the researcher's opinion that these questions elicited a fairly complete picture of assumed information. This opinion is further supported by officers suggesting that the researcher would make a "good officer." They seemed to be indicating that the researcher had come to understand "what it's like."

3. Causal schemata

Kelley suggests that "the simple direct question is perhaps a useful device for determining what causes are considered relevant for a given effect . . ." (Kelley, 1972b:170). We found that explanations spontaneously offered by the officers for their decisions and attributions provided a good deal of data on causal schemata. In cases where this was not forthcoming, direct questioning as suggested by Kelley was employed. Again, the variety of questions used to elicit information on causal schemata increased our confidence in the data.

4. Locus of causality

For the most part information on the locus of causality of attributions was volunteered during the course of the interview. That is, respondents almost always indicated clearly what they felt the causal factors were. In addition, for purposes of exploration, information was elicited concerning how strong the officer felt the causal factors were.

5. Confidence of attributions

Although officers often volunteered information about the confidence of attributions made in a given situation they were also asked directly "How sure are you?" Our confidence in the validity of these ratings is enhanced by the quality of the rapport established with the officers. During the initial six-week pretest, the officers became increasingly willing to admit lack of confidence about some of the attributions they made. In addition, the recording of the actions taken in response to an incident provided an important check of the confidence responses. For example, in cases in which the officers reported high confidence in their attributions, they tended to move with dispatch to implement decisions taken. Moreover, recording the officers' explanations for actions taken allowed an assessment to be made as to whether their actions were based on the confidence of their attributions or on their felt need to maintain order. Without these checks, incidents such as the following might have been misconstrued. An officer stopped pool and cigarette privileges for a "trouble-maker who had probably started a fight." The officer volunteered the information that he was moderately confident of his attribution "trouble-maker" and explained his action as a safety measure. "He probably did it, but even if he didn't, he'll think twice next time. Anyway, that's not a very serious punishment." The action taken in the context of the officer's explanation provides support for our acceptance of his confidence response.

6. Extremity of effect

Generally, the staff indicated clearly how serious they judged a given act to be. The officer's assessment of the seriousness of the act at the time of the incident was used in the analysis. This information was obtained by direct questioning when it was not offered spontaneously. As a rough check on the situational indication of extremity of effect, a list of incidents dealt with in the study was compiled. This list was provided to all officers who were asked to rank the seriousness of the incidents.[8]

In addition to data collected through the focused interview, we made use (particularly as reliability and validity checks) of such secondary sources of data as informants, documents, and direct observation. For example, charge sheets and incident reports provided a limited check on what officers said. The specifics of the focused interview as well ~~as~~ the way in which interview data were integrated with that from secondary sources is most economically considered in the discussion of recording procedures.

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[8] These rankings may be found in Appendix 2.

Recording Procedures: Theoretical and Methodological Concerns

In the focused interview, particularly in this setting, the researcher is provided with an abundance of data, including a large body of apparently irrelevant information. While, obviously, the hypotheses specify the variables on which data are required, it is nonetheless essential to develop a method for the recording of data which enables the researcher easily to identify those responses which are relevant, and to record them accurately (Gordon, 1969:172). This is particularly important in the present study, since verbatim accounts of relevant responses are necessary. This necessity follows from the fact that the interviewer was, of course, aware of the hypotheses. The likelihood of bias would therefore be greater if he were to translate responses into his own words. In addition, since the present research used a number of supplementary sources of data, it is possible that these sources of data would result in a set which would further bias non-verbatim recording. Finally, as this study employed independent judges for assessing the reliability of coding procedures, it was important that the data be as "raw" as possible.

Obviously, if verbatim accounts are important, a direct "solution" would be to tape record the respondents' answers. However, this technique was rejected for a number of reasons. Although some of the literature (Gordon, 1969:177) suggests that tape recorders are minimally disruptive, it is hard to imagine that this would be the case in a correctional setting. More generally, the researcher regards these "findings" with skepticism. In any case, whatever the influence on the respondents, this researcher finds that his interview performance is substantially altered when recorded. Finally, the high cost of transcribing recorded interviews made the tape recorder impractical.

Another obvious "solution" involves extensive note-taking during the course of the interview. This too presents difficulties. Copious note-taking during the interview may inhibit responses, annoy respondents, and, more generally, disrupt interaction.

As it happened, the physical design of the institution facilitated a solution to the problem of accurate recording. The dormitories are stacked: two on the ground floor, side by side (linked by a common "control room" looking out on the dormitories), and two identical units on the upper floor. The two control rooms are connected by a stairwell. During the period of the research, one of the upper dormitories was not in use.

This, together with the fact that the researcher circulated among the dormitories, allowed him to make use of the empty dormitory for note-taking purposes. Thus it was possible to take notes in private immediately after each interview. The researcher's memory was not overextended as most interviews were interrupted by the officers' duties. This meant that, typically, responses to three or four questions were recorded before proceeding with the rest of the interview, thus minimizing the problem of recall. Whenever the number of incidents was too great to allow written recording of responses, a pocket tape recorder was used to make notes. This instrument was kept in the empty dormitory or in the researcher's office at the institution and was never used to record the actual interview; it was used to insure that the researcher did not fall behind. The tape-recorded data could then be transcribed at the researcher's convenience. The setting and the work routine, then, allowed the fullest possible recording while at the same time minimizing the disruption of interaction.

Typically, assessing the validity of interview responses presents serious methodological difficulties. In light of this, the researcher took pains to develop several supplementary sources of data to aid in assessing the interview responses. In order that this be done systematically and efficiently, the field sheet[9] made room for the recording of the researcher's own observations, information from incident logs and charge sheets, and data from informants. The researcher took care to specify on the field sheet the sources of all data. The field sheet, then, was invaluable in recording data fully and accurately and in a way which aided later analysis.

Reliability, Validity and Sampling

It seems clear that reliability and validity are likely to be maximized to the extent that the researcher and his respondents share a universe of discourse and rapport in interaction (Gordon, 1969:48). This is precisely what the pre-test was designed to accomplish. We have discussed above the ways in which the techniques finally adopted were arrived at. Although we have confidence in our pre-test, it is obviously possible that bias and inadequacies could still have been present. Accordingly, the study was designed in a way such that evidence would be available to address the issues of reliability and validity.

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[9] See Appendix 1 for a copy of the field sheet.

Reliability

One indication of the reliability of the procedures used is provided by checking the responses of single officers across a variety of incidents. The fact that a given officer tended to provide the same "types" of responses to the questions asked of a variety of incidents suggested that the questions "worked." This is the case whatever the truthfulness of the answers.

A stronger test of the reliability of the focused interview was provided by virtue of the large number of incidents investigated. Specifically, a number of the field sheets involved the same officer(s) making attributions about the same boy in a number of similar incidents. The responses on these sheets were substantially alike. For example, one inmate appeared twelve times in the field sheets for fighting. One of the officers was the "attributor" for eight of these incidents. In all but one,[10] the attribution was essentially that: "He's a fighter." The explanation of this attribution always involved similar accounts of a deprived family background: "They just don't want any part of him." "They don't like him, so he takes it out on everybody else." In each case, in addition, the officers pointed out that this had left the boy with an "emotional problem." These recurrent features in the responses appeared despite variations in situational information for each case.

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[10] Even this one case is not a true exception, as the officer avoided what seemed to him to be unnecessary repetition by saying, "You know that kid as well as I do."

In addition, the researcher is confident that Hawthorne effects were kept to a minimum. Such effects are frequently problematical in social science research; particularly in studies which depend, as did the research reported here, on rapport with those investigated. Those studied in this research had, as previously mentioned, only the vaguest idea of the study's thrust. They could not consciously have given the researcher what he wanted to hear since they did not know. They were, of course, generally curious but were unaware of the specifics of the research. This conclusion is based not only on the researcher's experience but also on that of the three informants who all indicated that the correctional officers had no specific theories about the research. This situation remained virtually the same throughout the period of the research, in spite of intensive interviewing. Furthermore, the focused interview was designed in such a way as to avoid leading those interviewed. What has been described as an "open probe" was used extensively. Thus our questions asked for explication: "How do you know that?" "Why do you say that?" "Could you explain that to me?".

This process was continued until the officer involved appeared to have discussed all the factors he felt were relevant to his attributions.

Of course, the strongest test of reliability is replication. In studies of this kind, replication is particularly important. Clearly, observer bias is difficult to control and assess where there is only one experienced observer. One of the methodological strengths of the present work is that the techniques for eliciting and recording data have been specified so as to allow replication.

Validity

It can be argued that the issue of validity is best handled through the maximization of data and techniques (Denzin, 1970; Webb et al., 1966). Our data are derived not from any single source, but from unstructured interviews (pre-test), focused interviews, documents, observation, and informants. In developing these techniques, we have avoided engaging in the polemic about the validity of one technique over another, expecially where this polemic is divorced from considerations of setting. Rather, as we have repeatedly stressed, our techniques were designed in the context of a particular research setting. We feel that this approach argues well for the validity of the data.

The researcher was able to make on-going assessments of the validity of responses by observing the officers' change toward a greater willingness to share with the researcher information which was generally withheld from outsiders. Furthermore, the physical design of the facility frequently allowed the researcher to observe unobtrusively. He could then interview the officer and compare the two sources of data. Finally, the field sheet was so designed as to allow easy comparisons across sources of data. These comparisons strengthened our confidence ~~in~~ the focused interview.

Sampling

Our strategy has been to derive hypotheses from attribution theory and to examine these using the data obtained in one natural setting. The distribution of the pre-test data suggested that approximately 450 cases would provide adequate cell frequencies for these purposes.

The pre-test[11] and subsequent data gathering were carried out over a seven month period. At the end of this period an unanticipated difficulty arose. The officers became reluctant to elaborate on responses which they increasingly came to view as repetitious and unnecessary. As one officer put it: "Why ask me? You know that kid as well as I do." In view of the increasing frequency of such responses the research was terminated after 400 cases had been investigated. It appeared likely that continued research would have elicited distorted or partial data.

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[11] The pre-test is distinguished from the remainder of the investigation in that no cases from the pretest are included in the analysis presented in the following chapters.

This is not regarded as a serious methodological problem, since a smaller amount of good data provides a better empirical base than would a larger amount of questionable data, particularly given the purposes of our study. An assessment of the generalizability of the present study's findings can only be achieved through replication in a variety of natural settings. One of the contributions of the present work is that a technique has been developed which can be used in diverse settings. In addition, it is hoped that other techniques will be developed to investigate these issues.

The analysis of a single natural setting stands in contrast to the more usual statistical procedures based on a probability sample of individual behaviours. It must be emphasized that in studies such as this, two orders of sampling are involved. First, a natural setting is selected which therefore constitutes a sample of one. Second, in this case, incidents are sampled within this setting. Clearly, our 400 incidents represent a non-random availability sample of the incidents in the Training School. It is not based on probability sampling procedures. In such cases some methodologists take the position that statistical tests of significance, based as they are on the assumption of probability sampling, are inappropriate.[12] This position follows from the belief that one must have positive knowledge of randomness.[13] Others take the position that if there is no clear evidence of bias then randomness may be assumed. The author is persuaded by the former position. However, for the convenience of those less conservative in their use of tests of significance, chi square value have been calculated where the expected cell frequencies allow. The P values are presented in notes to the tables.

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[12] Selltiz *et al*. (1959:416), for example, provide the following caution: "It should be kept in mind that all statistical tests of significance, and thus all generalizations from samples to populations, rest on the assumption that the samples are not biased--that is, that the cases to be included in the samples have been selected by some procedure that gives every case in the population an equal, or at least a specifiable, chance of being included in the sample. If this assumption is not justified, significance tests become meaningless."

[13] See the discussion by Galtung (1967:358-389) of this and related questions.

Coding Procedures

In order to guard against bias in coding, the researcher's coding was checked against that of independent coders. Since it was unreasonable to ask our volunteers to code all 400 cases, a random sample of 100 cases was drawn.

The coding decisions of the independent judges also provided a test of the usefulness of some of Kelley's distinctions for attributions occurring in a natural setting.

The independent coders were informed that the study involved the decision making process engaged in by correctional officers in a training school. They were told that the coding of field data is a process of classifying into a limited number of categories the unique responses of each person interviewed. The researcher explained the field sheet to them detailing the entries contained in each cell. The independent coders were familiarized with the coding distinctions and were encouraged to ask questions about any aspect of the procedure which appeared to them to be problematic.

The codes employed are presented below, together with the comparisons between the researcher's coding and that of the independent coders. In addition, we discuss certain difficulties which arose with the coding procedures and which proved to be both methodologically and theoretically significant.

1. Information Sought: distinctiveness, consistency, consensus

The information search data were coded into these three categories.

"Distinctiveness information" refers to information which indicates that there is something unique about the boy involved or about the situation in question. For example, a boy had escaped from the institution. Information which indicated that the boy had only a week left to serve was coded as distinctiveness information. In such an example, distinctiveness information might also involve a number of different items. For example, information indicating that the door had been left open would make the situation highly distinctive.

"Consistency information" refers to information which indicates that the behaviour in question has been exhibited by the boy in question in the past. For example, information that the boy had tried to escape many times before was coded as consistency information.

"Consensus information" refers to information which indicates that others agree with the attributor's assessment of the boy. For example, an officer was told by fellow officers that the boy was a "runner," that is, a boy who repeatedly tried to escape; this was coded as consensus information.

2. Information Assumed: distinctiveness, consistency, consensus

The information assumed data were coded into these three categories and were further differentiated into "high" or "low" within each category.

3. Information Received: distinctiveness, consistency, consensus

The same coding operation as in "Information Assumed" was carried out here.

It is significant that the concepts "distinctiveness," "consistency," and "consensus" seem to "make sense to people." One of the strengths of these concepts is that they have face-validity--people can use them. This is evidenced by the fact that the researcher found no difficulty in coding the data in these terms and that the independent coders were in substantial agreement.

These independent[14] judges coded 100 cases chosen at random. The results are presented in Table 1. Despite the substantial agreement among the coders, in one-quarter of the cases there was disagreement in the coding of "distinctiveness." Most of these cases of disagreement could be attributed to an inconsistency in the researcher's recording of the cases. It will be remembered that the focus of our investigation is on attributions made about boys involved in "incidents,"[15] that is, those events which the officers feel require their special attention. This meant that our investigation of atrributional processes began with this baseline: an officer knew (or suspected) that an "incident" had occurred.

The recording of cases which resulted in the disagreements over the coding of "distinctiveness" included information relating to processes occurring before the baseline points. Specifically, these were often cases in which officers had "the feeling something was up." They

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[14] The coders were ignorant of attribution theory and of the specific hypotheses of the present investigation. Of course, they did the actual coding independently.

[15] There was wide consensus among the officers as to what constituted an "incident." Although the decision to call an event an "incident" itself involves attributions, these attributions are not investigated here.

TABLE 1

CODING AGREEMENT (IN PERCENT) OF RESEARCHER AND THREE JUDGES ON "DISTINCTIVENESS," "CONSISTENCY," AND "CONSENSUS" FOR A SAMPLE OF 100 CASES*

Researcher's Information Coding Categories	Coding Agreement of Researcher with Each Judge			Coding Agreement of Researcher and All Three Judges
	Judge 1	Judge 2	Judge 3	
Distinctiveness	80	78	84	75
Consistency	91	95	96	91
Consensus	92	95	98	92

*N = 300 since "distinctiveness," "consistency," and "consensus" occur three times for each case: information assumed, information sought, information received.

then began investigating to see if an "incident" had occurred and, if so, to reconstruct the "incident." The researcher had confused the coders by including data on the question of the occurrence of an "incident" with data on the attributional processes occurring after this decision had been made. For example, in one case, the researcher had recorded a good deal of information search which went on to see if a fight had in fact occurred and whether it was serious enough to warrant further investigation. The officer received information to the effect that "it was a real brawl." At this point he decided that an incident had occurred. The independent judges coded this initial search activity as distinctiveness search and the information received as distinctiveness information; the researcher did not.

Once this confusion had been uncovered the coders were asked to re-code all of the cases.[16] The results of the second coding are presented in Table 2. It is obvious that the clarification increased the reliability of the coding.

4. Locus of causality: internal, external

Verbatim attributions were coded as "internal"

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[16] Up to this point the coders were "volunteers." However, since "volunteers" can be pushed too far, they were paid for the second coding operation.

TABLE 2

CODING AGREEMENT (IN PERCENT) OF RESEARCHER AND THREE JUDGES ON "DISTINCTIVENESS," "CONSISTENCY," AND "CONSENSUS" FOR A SAMPLE OF 100 CASES*

Researcher's Information Coding Categories	Coding Agreement of Researcher with Each Judge			Coding Agreement of Researcher and All Three Judges
	Judge 1	Judge 2	Judge 3	
Distinctiveness	92	94	94	90
Consistency	94	94	96	94
Consensus	93	97	98	92

*N = 300 since "distinctiveness," "consistency," and "consensus" occur three times for each case: information assumed, information sought, information received.

when they involved personal characteristics, and "external" when they involved environmental factors. Thus, an attribution that "He's not right in the head" was coded as "internal." An attribution such as "Those boys had been on him for hours. It's no wonder he finally blew" was coded as "external."

Again, we found the distinctions between internal and external attributions useful for coding the data. The officers themselves distinguished between "aspects of the boy" and "aspects of the situation." However, the researcher discovered in his coding of the data that it was not a matter of determining the presence of one factor and the absence of the other; rather, it was necessary to determine which, if any, was predominant. Our exploration of the relative strengths of causal imputations allowed us to use this as the criterion for distinguishing between internal and external causal imputations. Accordingly the coders were asked to code causal attributions into the following codes: strong internal/strong external, strong internal/weak external, weak internal/strong external, weak internal/weak external.[17] In the comparison between the researcher's coding and that of the independent judges, there was a minimum of 90% concordance for any category.

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[17] See Appendix 1 for the coding sheet.

5. Assumed causal schemata: simple, multiple

Initially the researcher attempted to code assumed causal schemata into simple (causal schemata involving either internal or external causal factors) and multiple (causal schemata involving both internal and external causal factors).

However, as we have pointed out above, the attributors we studied attended (however slightly) to both external and internal pressures. The data on causal assumptions, then, were coded in terms of the relative strengths of internal and external imputations: strong internal/strong external; strong internal/weak external; weak internal/strong external; weak internal/weak external. No coding category had less than 87% concordance among the four judges.

6. Information search: simple, multiple

Initially, we wished to test the applicability of Kelley's distinction between "simple and multiple schemata" for information search activities. Although the data could be easily coded into these categories[18] some important considerations would have been blurred by restricting ourselves to this distinction. Our data allowed finer coding distinctions. From our initial inspection of the data, it seemed that while it was true that officers might search for internal information or external information in a direct search (cf. Davis and Phares, 1967), it was also true that, on many occasions, they were searching for "any" information. In other cases, they engaged in no information search at all.

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[18] Although officers do not make purely internal or purely external attributions, they often feel that in order to make an attribution they require only internal or only external information. That is, they may "know" the other.

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In fact, the information search activities codable as "multiple" were, as well, instances of undirected, open search. From our initial inspection of the data it appeared that the officers either "knew" what specific information they "needed," or felt that they "didn't know enough and had better know more." The officers frequently described these investigations as "talking to everyone about everything." This is illustrated in the following incident.

Some officers caught several boys sniffing glue on the bus coming back from Christmas pass. The officers did not seem to know where to begin their investigation. It appeared that they did not know whether this was something that most boys might get involved in, whether it was fairly typical behaviour of "their" boys, whether the boys were "excited" in this particular situation, etc.

The officers questioned all the boys involved, the social worker, fellow officers, even the researcher, about "what they thought." In other words, this kind of investigation seemed to involve a search for an appropriate causal schema. The officers were not looking specifically for information about the boys and about the situation; they appeared to be looking for information to know what specific information to look for.

As well, many of the activities codable as "simple" or "multiple" were examples of purely formal search--that is, motivated more by the necessity of filling out a formal report than by curiosity about the behaviour. These cases were coded as "no search." Cases were only placed in this category when the officers made explicit comments to that effect--"Just going through the motions."

Because of these considerations, the data were coded in terms of the following distinctions:

Directed Search	- Internal	(Simple)
	- External	(Simple)
Undirected Search	- Open	(Multiple)
No Search		

For these categories the minimum concordance between the researcher's coding and that of the judges was 87%.

7. Confidence of Attribution: high, medium, low

The officers' statements concerning the confidence of their attributions could reliably be placed into high, medium, and low confidence categories.

8. Extremity of Effect: very serious, moderately serious, less serious

The officers' statements regarding the extremity of effect could reliably be placed into the categories very serious, moderately serious, less serious.

CHAPTER III

INFORMATION AND ATTRIBUTION IN A NATURAL SETTING: THE HYPOTHESES

The data relevant to the hypotheses are presented below. Each hypothesis is discussed in turn. Each discussion includes an assessment of the hypothesis and an exploration of the theoretical and methodological implications of these data.[1]

Hypothesis One: Attributors will seek or assume distinctiveness, consistency, and consensus in information.

As Table 3 indicates, our data strongly support this hypothesis. Distinctiveness was sought or assumed in all cases, consensus in 96% of the cases, and consistency in 91%. Distinctiveness information was assumed in 68% of the cases; consistency in 65% of the cases; and consensus in 79%. Distinctiveness information was overtly sought in 80% of the cases; consistency in 52%, and consensus in 41%.

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[1] The discussion following Hypothesis One provides a perspective for the analytic understanding of subsequent data presentation.

TABLE 3

MODE OF INFORMATION SEARCH BY TYPE OF INFORMATION (IN PERCENT) FOR THE TOTAL SAMPLE (N = 400)

Information Categories	Mode of Information Search					
	Overtly Sought or Assumed		Overtly Sought		Assumed	
	Yes	No	Yes	No	Yes	No
Distinctiveness	100	0	80	20	68	32
Consistency	91	9	52	48	65	35
Consensus	96	4	41	59	79	21
	$X^2 = 39.25$ d.f. = 2 p. = $<.001$		$X^2 = 132.5$ d.f. = 2 p. = $<.001$		$X^2 = 20.97$ d.f. = 2 p. = $<.001$	

Here, and in subsequent cases where tests of significance are employed, chi square is used. The use of chi square is appropriate since the data are at the nominal level of measurement and expected cell frequencies are sufficiently large.

It is of particular significance that distinctiveness information was sought or assumed in all cases. This finding is indicative of the special role of distinctiveness information in the attribution process. It might be argued that part of the explanation for the universality of distinctiveness information is that we deal only with attributions made in response to "incidents," that is, events defined by the officers as requiring special attention. However, as we mention in Chapter Two, the officers do not react to an incident; they react to a boy in a situation. In order to develop this context, the officers overtly sought further distinctiveness information in 80% of the cases (Table 3). This information search occurred after the officers had tentatively identified an event as an incident.

This finding regarding distinctiveness information points to an important theoretical issue. Previous research has tended to operate on the assumption that there is no difficulty in specifying the stimulus to which the subject is responding. The researchers may feel safe in making this assumption because of the apparent simplicity of the attributional tasks which have been used. However, as our data show, the question of what constitutes the stimulus is very complex and should not be handled by assumption. We suspect that this may even be true when the experimenter has attempted to simplify aspects of the stimulus situation. Part of information search activity is devoted to uncovering the stimulus. The stimulus is not obvious; rather it is constructed by the actor. Distinctiveness, then, can mean different things at different stages of the attributional process. For example, an officer may know that a particular boy ran away; he may assume or search for distinctiveness information regarding that boy. However, in every case, the officer seeks to place the boy in a situation. He feels he cannot respond with confidence until he knows who is involved in what circumstances. It is "boy in situation" which is the "stimulus" and it is the distinctiveness of this stimulus which will provide part of the basis for the officer's attribution. Thus, it is not simply that the event is "known" to be distinctive; the officers want to know specifically what is distinctive about the boy, the situation, the boy in the situation.

In view of this, it is ironic that "unusual" is an attribution which the literature treats as a property of the simulus, rather than as an attribution. For example, Jones and Davis (1965) argue that unusual or surprising actions carry more information about an actor. It is no doubt true that unusual behaviour frequently calls into consciousness a causal schema which allows an attribution to be made. In our study, this seems to have occurred in 20% of the cases (Table 3). However, Jones and Davis neglect the consideration that an attribution that an event is unusual may be tentative and may motivate search for more specific information.

Consider the following example. One of the new officers caught two boys engaged in mutual masturbation. He found the act surprising and morally reprehensible. He immediately separated the boys and told them he would talk to them later. The officer then went to the Floor Co-ordinator to seek his advice. He wished to know how unusual this kind of behaviour was in general, how unusual it was for these particular boys, and, of course, what ought to be done. The Floor Co-ordinator, a man with many years of institutional experience, had a clear pre-definition of mutual masturbation as being an incident requiring special attention. Nonetheless, he felt compelled to engage in further distinctiveness search. He asked the new officer who the boys were so that he could judge whether there was a previous history and whether one of the boys was being "initiated." He explained that it was not particularly unusual for some of the older boys to induce younger boys to participate.

This kind of occurrence is not unusual and illustrates that a fundamental distinction must be made when considering attributions: at what level of abstraction is the attributor working? An officer might assume that "all boys fight from time to time" or that "any boy in an institution is bound to get himself into a fight sooner or later." He may make more specific assumptions: "That boy is a fighter," or "You always get fights at Christmas." Not only are these assumptions at different levels, they are also used differently by the officers.

The officers are working with boys in a correctional setting. The assumptions that they call forth, then, are those involving boys and correctional institutions. We can distinguish among assumptions made at the following levels of abstraction:[2]

1. General
    a) Boys[3]
    b) Correctional institutions for boys

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[2] Compare Silverman's (1970:122) discussion of concentric circles of typification. See also Schutz (1964).

[3] We note here that the officers make certain assumptions about "all boys." This would appear to suggest a pure internal attribution; however, the use of such phrases as "from time to time," or "sooner or later" underscore the officers' awareness that there must be some external factors present to account for any behaviour. See pp. 71-79.

2. Categorical
    a) These boys
    b) This correctional institution
3. Particularistic
    a) This boy
    b) This situation

As the officer makes use of assumptions at the general level of abstraction, he can decide whether any information search is required to arrive at an "explanation." Is this an instance of "what any boy would do"? For some kinds of events, the causal schemata incorporated in the assumptions at the general level of abstraction are sufficient for "understanding" the behaviour. If the behaviour is taken as an instance of "what any boy would do," nothing more is required; the behaviour is explained. In such cases, the causal schema invoked "provides" an attribution without any further cognitive activity. "What do you expect: boys will be boys!"

In other cases, the officer may not be satisfied that the behaviour in question is a typical example of "boy behaviour." "These boys don't know how to say 'thank you.'" Nonetheless, he may require no further information as the assumptions he makes about the boys in this setting "provide" an attribution.

For other behaviours, the officer may not be satisfied that the behaviour in question is an example of "these boys' behaviour." "You've really got to watch out for that one!"

The causal schemata which organize these assumptions (at each level of abstraction) do provide the basis for generating attributions. First, however, the attributor must decide which of the schemata in his repertoire is appropriate for any given event. For some events, this decision is easily made. In fact, the attributor may appear to arrive at a causal attribution with a minimum of cognitive activity. In other cases, the attributor may find it necessary to search out additional information in order to select an appropriate causal schema.

This selection of the appropriate causal schema is crucial. The attributor must decide what kind of event he is faced with. In many cases, he must be actively engaged in constructing a view of the stimulus situation. This constructive work is sometimes guided by the tentative selection of a causal schema and by his assessment of the seriousness of the incident (see below). The tentative selection of a causal schema provides the attributor with questions to guide his information search. Thus, if the officer tentatively refers the incident to the assumptions he holds at the categorical level of abstraction, he may search for information which corroborates his view that the incident is an example of "boy behaviour in institutions." If he feels his search has been successful, that is, if he finds information which supports his hypothesis, he then can make a confident attribution: he has "sufficient explanation" for the incident.

This search for an appropriate causal schema is nicely illustrated by new officers. They enter with assumptions at the general level of abstraction. They are at least fairly confident that they "know what boys are like." However, they tend to be largely ignorant of the behaviour common in institutions. When confronted with "unusual" behaviours, that is, those not explained by their most general assumptions, they engage in a search for the appropriate causal schema. This is generally characterized by the tentative application of assumptions at the categorical level of abstraction. For example, one new officer was particularly shocked by the language used by one of the boys. He ordered the boy to stop and then inquired among fellow officers as to whether this was a typical case of "these boys' behaviour," "I guess you get this all the time, eh? I guess you just learn to expect it?" When he was told that swearing was, in fact, not the norm, he moved to the particularistic level of abstraction; that is, he asked about this particular boy.

If, as in this example, referring the event to a specific level of abstraction provides an hypothesis, the attributor may be well on his way to an attribution. This follows from a fundamental characteristic of attributional processes (Kanouse and Hanson, 1972:47): the concepts which attributors use in describing a phenomenon are also frequently the concepts they use in explaining it. This correspondence may, as social scientists are intimately aware, lead to tautology: Paul's anxious behaviour is explained by his trait of anxiety.[4]

To illustrate the utility of these distinctions, we return to the example of the new officer investigating the case of mutual masturbation. The new officer seemed clearly to be engaged in a search for the appropriate level of abstraction to which to refer the incident. On the other hand, the Floor Co-ordinator seemed to be searching for distinctiveness information at the particularistic level of abstraction, information which would allow him to reconstruct the incident. Thus, it seems clear that even if an action is predefined as unusual, the attributor will often find it necessary to engage in information search to help him judge "how unusual." Homosexual behaviour "is" unusual in general; it is more frequent but still unusual in the institution;

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[4] See Mischel's (1968) review of trait-state theories in psychology.

it would be particularly unusual if one of the boys involved was neither a "homosexual type" nor easily victimized.

In this incident, and in many others, a tentative application of the attribution "incident" was made. Frequently, the attributor seemed to be concerned with establishing whether the situation was nearly normal or whether an incident had in fact occurred.[5]

These points are reinforced by another finding. Distinctiveness information was assumed in 68% of the cases (Table 3); nevertheless, the officers nearly always checked their assumptions by overtly seeking further distinctiveness information. In fact, in only 55 cases (13%) did the officers fail to construct a stimulus situation which they viewed as highly distinctive.

This was not the case with consensus information. The officers assumed consensus much more frequently than they sought it. In fact, they were most likely to assume consensus, as opposed to consistency or distinctiveness information (Table 3) and least likely to search for consensus information (Table 3). The officers believed that they did have consensus on most issues. In fact, a large proportion of the cases in which consensus information was overtly sought involved new officers.[6]

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[5] The process of normalizing "unusual behaviour" is well documented. See, for example, Yarrow *et al*. (1955); Sampson *et al*. (1962); Jackson (1954).

[6] Future investigators may wish to attend to the

Hypothesis Two: Confident attributions will be made where information of high distinctiveness, high consistency, and high consensus is obtained (or is assumed to exist).

As Table 4 indicates, the confidence with which an attribution was made was highest when information received or assumed on distinctiveness, consistency, and consensus was high ($\tau = .19$).* When this information was high in all categories, 85% of the attributions were made with high confidence; none of the attributions were made with low confidence with this distribution of information. When information was not high in all categories there was a fairly even distribution among high, medium, and low confidence attributions.

Although the hypothesis is supported by the data, it is significant that even when information was not high in all categories, over 30% of the attributions were made with high confidence. Table 5 presents the data relevant to specifying the conditions under which attributions were made with high confidence despite the weakness or lack of information in one or more of the categories.

"appropriateness" of information search in various situations. This may be particularly relevant to the search for consensus information. For example, "old hands" may take as a sign of incompetence the frequent seeking of consensus information. On the other hand, the "old hand" may be offended by a new man not seeking consensus information.

*All taus are Goodman and Kruskal's asymmetrical τ_c. See Mueller et al (1970: 262-263).

TABLE 4

STRENGTH OF INFORMATION RECEIVED OR ASSUMED BY DEGREE OF CONFIDENCE IN ATTRIBUTION (HIGH, MEDIUM, LOW) (IN PERCENT) FOR CASES ALL HIGH AND FOR CASES NOT ALL HIGH ON DISTINCTIVENESS, CONSENSUS, CONSISTENCY

Confidence in Attribution	Strength of Information Received or Assumed	
	Distinctiveness, Consistency, Consensus All High (N = 199)	Distinctiveness Consistency, Consensus Not All High (N = 201)
High	85	31
Medium	15	37
Low	0	32
Total	100%	100%

$X^2 = 133.16$; d.f. = 2; p. = $< .001$

TABLE 5

STRENGTH OF INFORMATION RECEIVED OR ASSUMED BY DEGREE OF CONFIDENCE IN ATTRIBUTION (IN PERCENT) FOR CASES HIGH ON ONLY TWO AND FOR CASES HIGH ON ONLY ONE OF DISTINCTIVENESS, CONSISTENCY, CONSENSUS

Confidence in Attribution	Strength of Information Received or Assumed					
	High on Only Two of Distinctiveness, Consensus, Consistency (N = 107)			High on Only One of Distinctiveness, Consensus, Consistency (N = 75)		
	Not High on Distinctiveness (N = 12)	Not High on Consistency (N = 65)	Not High on Consensus (N = 30)	Distinctiveness (N = 51)	Consistency (N = 0)	Consensus (N = 24)
High	0	29	37	0	--	0
Medium	100	71	63	22	--	0
Low	0	0	0	78	--	100
Total	100%	100%	100%	100%	--	100%

In no case was a confident attribution made without high distinctiveness information. Nor did confident attributions occur when information was high on any one category alone. However, the combination of high distinctiveness information and high information on either one of the remaining categories allowed a confident attribution. Where distinctiveness and consensus were high, 29% of the attributions were made with high confidence; where distinctiveness and consistency were high, 37% of the attributions were made with high confidence. An inspection of the cases in which such attributions were made suggest that the seriousness of effect is an important factor. (See Tables 8 and 10). This seems particularly to be the case for the confident attributions made under conditions of low consistency information. For example, one of the inmates was convicted on a charge of attempted murder. Not surprisingly, the officers felt that with such an offence once was enough. In general it seems that the officers felt that certain offences were so serious that they could be confident in their attributions without consistency information.[7]

The number of cases (37%) in which highly confident attributions were made with weak or no consensus information was surprisingly high. A large number of these cases can best be understood by distinguishing two kinds of consensus assumptions: *assumed consensus* and *assumed theoretical consensus*. Assumed consensus occurs when the officer feels that other officers *make* the same attributions in similar circumstances. Assumed theoretical consensus occurs when an officer believes that other officers *would* make the same attribution *if* they had access to the same specific information. Thus, even when an officer knows that there is disagreement over a case, he nonetheless is frequently able to assume a general consensus.

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[7] The number of cases in which information was low on only one category is too low to allow a meaningful breakdown (107 cases distributed over 27 cells).

The officers were far more likely to have confidence in their attributions if information was high on at least two categories than if information was high on only one category (τ = .45). As we have indicated, in no case was there a highly confident attribution made when information was high in only one of the categories (Table 5). An inspection of the cases in which information was high on only one of the categories and, therefore, only a medium or low confidence attribution was made, indicated that the consequences (for the officer and for the boy(s)) of making the attribution were judged to be minimal. In general these findings increase the confidence which can be placed in the data supporting the hypothesis.

Hypothesis Three: Attributors will tend to rely most heavily on attributions of internal causality.

As we have already pointed out in Chapter Two, causal attributions which relied exclusively on internal or external factors were never made. As the officers themselves insisted, even the "worst" boy must be understood in terms of his situation.

Given the finding that no cases of purely internal causal attribution were found, one might argue that our original hypothesis is disconfirmed. However, our hypothesis does not specify internal cause alone. That internal cause is never used alone seems, from our data, to be glaringly obvious. However, many of the experimental studies investigating the locus of causal attributions have found attributors who seemed to use pure internal attributions (McArthur, 1972). Although McArthur, for example, allows her attributors to assign the locus of causality to a combination of internal and external factors, she treats the combinations as a residual category in not taking into account the relative strengths of these causal imputations. By contrast, our data suggest that all causal attributions may be combinations and that, therefore, the relative strengths are crucial. These data, then, clearly indicate that future investigations of causal attributions might profitably employ a methodology which will not force attributions into pure types. As it is, we suspect that the results showing pure internal or pure external judgements are due more to the research methods employed than they are to the attributors. It is therefore necessary to look at combinations of causal factors, considering their relative strengths. As Table 6 indicates, the data strongly support the hypothesis when relative strengths are considered. In 53% of the cases causal attributions were strong internal, weak external; 19% were strong internal, strong external; 17% were weak internal, strong external; 11% were weak internal, weak external. Thus, 72% of the attributions involved strong internal causal imputations.

In no case in which the internal cause was judged to be weak was a high confidence attribution made. In fact, in at least 50% of these cases, confidence in attributions was low. The imputations involving strong internal, weak external causal factors resulted in the most confident attributions. In fact, 87% of these imputations produced highly confident attributions; in no case did they result in a low confidence attribution (Table 7). In cases in which both external and internal factors were considered to be strong, it was also likely

TABLE 6

RELATIVE STRENGTH (STRONG/WEAK) OF INTERNAL CAUSAL ATTRIBUTIONS AND THE RELATIVE STRENGTH (STRONG/WEAK) OF ALL COMBINATIONS OF INTERNAL-EXTERNAL CAUSAL ATTRIBUTIONS (IN PERCENT) FOR THE TOTAL SAMPLE (N = 400)

Internal-External Causal Attributions				Total
Strong Internal (N = 288) 72		Weak Internal (N = 112) 28		100%
Strong Internal Weak External (N = 213) 53	Strong Internal Strong External (N = 75) 19	Weak Internal Strong External (N = 69) 17	Weak Internal Weak External (N = 43) 11	100%

$X^2 = 38.89$; d.f. = 1; p. $< .001$

TABLE 7

RELATIVE STRENGTH (STRONG/WEAK) OF ALL COMBINATIONS OF INTERNAL-EXTERNAL CAUSAL ATTRIBUTIONS BY DEGREE OF CONFIDENCE IN ATTRIBUTION (HIGH, MEDIUM, LOW) (IN PERCENT) FOR THE TOTAL SAMPLE (N = 400)

Confidence in Attribution	Internal-External Causal Attributions			
	Strong Internal Weak External (N = 213)	Strong Internal Strong External (N = 75)	Weak Internal Strong External (N = 69)	Weak Internal Weak External (N = 43)
High	87	67	0	0
Medium	13	21	49	46
Low	0	12	51	54
Total	100%	100%	100%	100%

The difference between strong internal causal attributions (with either strong or weak external causal attributions) and weak internal causal attributions (with either strong or weak external causal attributions) with respect to confidence in attribution is significant at the .001 level. ($X^2 = 241.12$; d.f. = 2; $p < .001$).

that attributions would be made with high confidence (67%). As well, as Table 7 indicates, there appears to be a relationship between locus of causality and confidence in attribution (τ= .38). The strong internal, strong external combination was less likely to result in a confident attribution than was the combination strong internal, weak external. As well, in 12% of the cases the confidence with which the former ("strong, strong") attribution was made was low. This finding appears to be due to the balance of the causal factors in such cases. Consider the attributions "easily provoked person" and "provoking situation." If the internal factor is judged to be strong and the external weak, the causal imputation is clear. For example, the officer might say that the situation would not have triggered any of the other boys (weak external). If, however, the external is judged to be strong as well, the causal imputation is no longer clear. For example, the officer might claim that the boy is very easily provoked, but any of the boys might have been provoked in this situation (strong external).[8] In such cases, the officers tended to provide multiple attributions, often with different degrees of confidence. "He's a little troublemaker--but maybe Christmas is really getting to him too."

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[8] Many cases of this type occurred just prior to Christmas. The officers did have difficulty arriving at confident attributions. Boys whom they had previously identified as "trouble makers" might be excused because of "Christmas fever."

In no cases in which there was a weak internal imputation (even when combined with a strong external imputation) was there a highly confident attribution. It is not surprising that when both internal and external were judged to be weak, low confidence attributions tended to result (54%).

One of the factors which helps to account for the variation within each of these categories is the perceived seriousness of the incident. Table 8 presents data on the relationship between causal attribution and confidence of attribution controlling for seriousness of incident.

Inspection of the data in this Table reveals that there was a greater likelihood that attributions would be made with high confidence when the incident was judged to be serious. This finding is understandable, given that (1) the officers felt it was necessary that they be confident of their attributions when the incident was serious, and (2) the officers referred serious incidents to a level of abstraction whose assumptions often led them to search for more specific information. Predictably, this tendency toward greater confidence with serious cases was most pronounced when the causal imputations were strong internal, weak external: all such

TABLE 8

RELATIVE STRENGTH (STRONG/WEAK) OF ALL COMBINATIONS OF INTERNAL-EXTERNAL CAUSAL ATTRIBUTIONS FOR VERY SERIOUS, MODERATELY SERIOUS, AND LESS SERIOUS EFFECTS BY DEGREE OF CONFIDENCE IN ATTRIBUTION (HIGH, MEDIUM, LOW) (IN PERCENT) FOR THE TOTAL SAMPLE (N = 400)

Confidence in Attribution	Internal-External Causal Attributions*											
	Very Serious Effects (N = 180)				Moderately Serious Effects (N = 156)				Less Serious Effects (N = 64)			
	S.I. W.E.	S.I. S.E.	W.I. S.E.	W.I. W.E.	S.I. W.E.	S.I. S.E.	W.I. S.E.	W.I. W.E.	S.I. W.E.	S.I. S.E.	W.I. S.E.	W.I. W.E.
N =	(110)	(40)	(30)	(0)	(39)	(35)	(39)	(43)	(64)	(0)	(0)	(0)
High	100	80	0	--	51	51	0	0	88	--	--	--
Medium	0	20	73	--	49	23	31	46	12	--	--	--
Low	0	0	27	--	0	26	69	54	0	--	--	--
Total	100%	100%	100%	--	100%	100%	100%	100%	100%	--	--	--

*S.I. - Strong Internal; W.I. - Weak Internal; S.E. - Strong External; W.E. - Weak External.

causal imputations resulted in highly confident attributions (Table 8).[9]

Our argument that officers referred serious incidents to a level of abstraction which "provided" detailed information is reinforced by the finding that there were no instances of weak internal, weak external imputations when the incident was judged to be serious. Further, for serious incidents the motivation to search for additional information seemed to be greater.

A further interesting pattern is evident in the data presented in Table 8. Confident attributions were made most often when the incident was either most serious or least serious; cases of moderate seriousness tended to result in attributions of lower confidence ($\tau = .21$). Strong internal, weak external imputations and strong internal, strong external imputations each resulted in highly confident attributions in about one-half of the cases. In all the less serious incidents the causal imputations involved strong internal, weak external factors and tended to result in highly confident attributions (88%).

Cases of moderate seriousness were not so important that a confident attribution was felt to be necessary, nor did these cases "carry" as much information for the officer. However, they were sufficiently serious that the officers felt concerned about the consequences of their attributions. On the other hand, less serious incidents were referred to higher levels of abstraction and the consequences of a confident attribution were minimal. Such incidents tended to be understood as "boy" behaviour or "these boys" behaviour.

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[9] Tau is .61 for the relationship between locus of causality and confidence of attribution when very serious effects are isolated.

Clearly, then, the relationship between the causal imputation and the causal schema invoked is important in understanding the attribution process. Particularly, the causal schema invoked appears to influence the officer's decision as to whether additional information is required.

Hypothesis Six:[10] The assumption of a simple causal schema will result in simple overt information search activities; the assumption of a multiple causal schema will result in multiple overt information search activities.

This hypothesis (plausible from the experimental results) is not supported by the data; we find no cases in which simple causal schemata are used. In view of our consistent finding that pure forms (internal cause only, external cause only) were never assumed by our attributors, the simple conclusion that this hypothesis is not supported by the data is true; it is also totally unenlightening, since none of our cases fits the simple cause schemata.

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[10] The discussion will follow more clearly if we first deal with information search and then deal with information received. Accordingly, we consider Hypothesis Four last.

These findings raise a number of issues. Many experimental studies find a large proportion of attributors making use of simple causal schemata; we find none in our field study. How is this to be accounted for? Several factors may be suggested.

First, the fact that our investigation was carried out in a setting which is itself unusual may mean that attributors are less likely to ignore situational pressures in making causal attributions. As we have pointed out, this tendency may even be heightened when adults make attributions about children. We know that in this particular setting the attributors investigated consistently assumed that situational pressures were significant, at least to some degree. We do not know how attributors weigh internal and external causal factors in other natural settings.

Second, the officers felt that an understanding of the inmates was an integral part of their job. They might then feel that the recognition of environmental pressures, as well as dispositional factors, is an index of their professional competence.

Third, we suspect that a good deal of the "internal only" results obtained in experimental conditions are an artifact of the methods used. This is a serious charge which requires support. Let us consider, for example, the Jones and Harris (1967) experiment on the attribution of attitudes. Lest we be accused of choosing an unrepresentative example, it should be noted that this experiment is discussed in approving terms in Jones and Nisbett's (1972) review. As well, the study has been replicated by Synder,[11] and by Jones, Worchel, Goethals, and Grumet (1971). Jones and Harris found that their subjects tended to rely on internal imputations even in situations in which the experimenters stressed the importance of external constraints. In this study, subjects were asked to read papers or listen to speeches on a political issue. The subjects were informed that the material was prepared by students. The subjects were requested to assess the writer's "true attitude" or "real opinion." Experimental groups were formed by telling one group of subjects that the writers had complete choice in deciding which side of the issue to defend; the other group of subjects was told that the writers had been given no choice but had been instructed as to which side of the issues to defend. Jones and Harris found that even in this "no-choice" group, subjects tended to assess the "real opinion" of the writer on the basis of the communication they received. This is not surprising since the subjects were asked to respond in terms of dispositional factors[12] and were given no opportunity to respond in terms of situational constraints. That is, the subjects were asked to give the writer's "real opinion." Had the researchers asked the question, "Why do you think the writer took this stand?" we feel confident that they would less likely have received pure internal attributions.

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[11] Unpublished work summarized in Jones and Nisbett (1972:81).

Furthermore, the experiment also fails to provide any opportunity for information search. If you give me "inadequate" information on which to base a decision and require that I make it anyway, I am forced to use what I have. I would much prefer, before making a decision, to gather further information. Indeed, if the decision is of any personal import, I would likely refuse to make an attribution until I was able to obtain

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[12] Alexander and Epstein (1969:385) make a similar point in their critique of studies of dispositional inference. They comment: ". . . observers are virtually compelled to explain discrepant behaviours in dispositional terms."

"sufficient" information.[13]

Jones and Nisbett draw the following conclusion from this experiment:

> The Jones and Harris experiment provides evidence, then, that observers are willing to take behavior more or less at "face value," as reflecting a stable disposition, even when it is made clear that the actor's behavior is under severe external constraints.
> (Jones and Nisbett, 1972:81)

The conclusion does not follow from the data presented.

Obviously, we require a good deal of careful research before we will be able to resolve these issues. Nonetheless, it seems appropriate to make use of our data to make some suggestions which may contribute to a refinement of the conceptualization of causal schemata.

> Causal schemata reflect the individual's basic notions of reality . . . the causal schemata enable him to integrate and make use of information gained from temporally and spatially distinct occasions. Once it is learned a schema may be activated by any of a number of appropriate sets of data or cues and it thereby has "mobility" in that it is applicable to a broad range of objects and situations.
> (Kelley, 1972b:153)

This general conceptualization of causal schemata has been used profitably by a number of social scientists (e.g., Piaget, 1952, 1954; Woodworth, 1938; DeSoto, 1960; DeSoto and Kuethe, 1959; Singer, 1968; Abelson, 1968). We agree with these authors that causal schemata are basic to cognitive activity. They form a foundation which allows us to decide what, of that which we know, is relevant, and to decide what further information is necessary. However, our data make it clear that a complex series of processes are involved; it is not a matter of schemata being activated by cues and mechanically producing attributions. Although some of the experimental work based on Kelley's model treats attributions as mechanical, Kelley (1972b, 1973) has recently cautioned against such a view.

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[13] For evidence on these points see Heslin *et al*. (1972).

> . . . one must identify the many important instances in which the appropriate schema is brought into play only tentatively and inferences from it are withheld until additional information can be gathered as to the distribution of effect in relation to causes.
> (1972b:173)

Accordingly, we devote the remainder of this section to an exploration of causal schemata in attributional processes in light of the data we have gathered. We then present revised hypotheses which can be tested in other settings.

The data in Table 9 show fairly clear patterns of information search in terms of the likelihood of engaging in overt search and the types of information search given variations in assumed causal schemata ($\tau = .14$).

When the assumed causal schema reflected a balance between external and internal imputations, officers were most likely to engage in some type of overt information search. When both were assumed to be strong, the

TABLE 9

ASSUMED CAUSAL SCHEMATA (INTERNAL-EXTERNAL) BY TYPE OF INFORMATION SEARCH (IN PERCENT) FOR THE TOTAL SAMPLE (N = 400)

Type of Information Search	Assumed Causal Schemata			
	Strong Internal Weak External (N = 197)	Strong Internal Strong External (N = 50)	Weak Internal Strong External (N = 103)	Weak Internal Weak External (N = 50)
Internal (simple)	26	0	0	10
External (simple)	10	50	10	0
Open (multiple)	21	50	46	74
No Search	43	0	44	16
Total	100%	100%	100%	100%

officers engaged in information search in all cases; when both were judged weak, predictably, the officers sought additional information in most cases (84%). On the other hand, when one was assumed to be strong and the other weak, the officers engaged in overt search in fewer than 60% of the cases. The significance of these findings is more clearly apprehended when we consider the kind of information search guided by each of these assumed causal schemata.

When both internal and external factors were assumed to be strong, the officers either engaged in external information search (50%) or open search (50%). In no case did they search for only internal information. This suggests that the officers had more confidence in their assumptions of internal causality. Their search activities seemed to be directed at either actually evaluating the strength of the external factors or assessing the balance between internal and external factors. The fact that the officers did not find it necessary actually to evaluate their internal imputations lends further support to our third hypothesis.

When the officers assumed that the internal factors were strong and the external weak, they more often engaged in no search (43%). When they did search, they were most likely to look to internal factors (26%); less frequently they engaged in open search (21%); and infrequently they engaged in external search (10%). This indicates that officers were most comfortable with attributions based on assumptions of strong internal, weak external causality. The internal search carried out under these conditions appears to be an attempt to verify for the officers, and for others, what the officer already knew.

When the officers assumed that internal factors were weak and external strong, they frequently engaged in no search (44%). When they engaged in search it was most frequently open search (47%) and, infrequently, external search (10%). It seems significant that with this assumption, the officers were more than twice as likely to engage in open search then was the case with the assumption of strong internal, weak external causes. This underscores our interpretation that the officers are most comfortable with the latter assumption.

Our data suggest the following hypotheses:

1. Attributors will be most likely to engage in information search when internal and external causal factors are assumed to be closely balanced.
2. Attributors will be most likely to engage in no search or simple verification search when they assume internal factors to be strong and external

factors to be weak.

3. Attributors will be most likely to engage in open search whenever internal factors are assumed to be weak.

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Much of the internal variation in the types of information search resulting from the various causal schemata can be understood by considering the influence of "seriousness of offence." This is examined below.

Hypothesis Five: The more extreme the effect to be attributed, the more likely the attributor is to assume that it entails multiple necessary causes.

This hypothesis, from Kelley (1972b:156), is not supported by the data. To reiterate, all cases involved multiple necessary causes. As with the preceding hypothesis, our discussion will be in terms of the coding refinements discussed in Chapter Two. We then suggest new hypotheses.

In Table 10 we examine information search activities resulting from assumed causal schemata as influenced by seriousness of effect.[14] Our data indicate that overt

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[14] Although the cell frequencies in this table are small, we nonetheless feel that these data are useful for generating hypotheses.

TABLE 10

ASSUMED CAUSAL SCHEMATA (INTERNAL-EXTERNAL) FOR VERY SERIOUS, MODERATELY SERIOUS, AND LESS SERIOUS EFFECTS BY TYPE OF INFORMATION SEARCH (IN PERCENT) FOR THE TOTAL SAMPLE (N = 400)

Type of Information Search	Assumed Causal Schemata*											
	Very Serious Effects (N = 180)				Moderately Serious Effects (N = 156)				Less Serious Effects (N = 64)			
	S.I. W.E.	S.I. S.E.	W.I. S.E.	W.I. W.E.	S.I. W.E.	S.I. S.E.	W.I. S.E.	W.I. W.E.	S.I. W.E.	S.I. S.E.	W.I. S.E.	W.I. W.E.
N =	(133)	(20)	(21)	(6)	(43)	(30)	(46)	(37)	(21)	(0)	(36)	(7)
Internal (simple)	16	0	0	83	33	0	0	0	71	--	0	0
External (simple)	0	0	0	0	44	83	22	0	0	--	0	0
Open (multiple)	32	100	100	0	0	17	59	100	0	--	0	0
No Search	52	0	0	17	23	0	19	0	29	--	100	100
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	--	100%	100%

*S.I. - Strong Internal
W.I. - Weak Internal
S.E. - Strong External
W.E. - Weak External

search, particularly open search, was more likely the more serious the effect. The less serious the effect, the less likely there would be any overt search.

We first consider those incidents which were judged to be most serious.[15] When the officers assumed strong internal, strong external causal factors they always engaged in open search. Clearly, for very serious effects, the officers felt it necessary to "understand" the relationship between internal and external causes. This kind of search seems less a test of the assumption than an exploration of the relationship between the assumed causal factors. Consider the following example.

A Floor Co-ordinator was called in to handle a case in which "a trouble maker" had struck an officer who had been "provoking the boy for weeks." The Floor Co-ordinator assumed strong internal and strong external factors were operating. The open search he initiated was concerned with ascertaining details about the specific situation and the quality of the relationship between the boy and the officer in the immediate past. In addition, he asked the boy to tell him "What's your problem?" This seemed to be an attempt to determine the boy's feelings when the incident occurred. His search seemed to be motivated by the desire to weigh the causal factors he assumed were operative.

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[15] When very serious effects are isolated Tau is .24 for the relationship between assumed causal schemata and information search.

Data on the officers' ranking of "seriousness" are found in Appendix 2. There was very high agreement among the officers.

When the officers assumed internal factors were weak and external strong, they again engaged solely in open search. This again emphasizes the officers' dissatisfaction with such a causal assumption, particularly when the effect was judged to be serious.

When both internal and external were assumed to be weak, the officers most frequently searched for internal information (83%). Once again, this finding suggests that the preferred causal schema, particularly for serious effects, was strong internal, weak external.

When the officers assumed this causal schema (strong internal, weak external) they engaged in no search in 52% of the cases. In 16% of the cases they engaged in simple verification search (internal only). In the 32% of the cases in which they engaged in open search the search seemed to be motivated less by a desire to check on the assumptions than by the belief that they ought to have as much knowledge as possible about serious incidents.

The most consistent finding in cases of low seriousness was that officers tended not to engage in any information search.[16] In fact, the only circumstance which resulted in any search activities was the assumption of strong internal, weak external factors. In these cases the officers sought internal information (71%). This somewhat surprising finding can be understood, in part at least, through the following comment of one of the officers: "It is surprising how much you can find out about these boys by watching the little things they do." The implication we take from this is that the officers "use" these minor incidents in their attempts to characterize a boy. As we have previously indicated, for very serious effects consistency information seemed to be far less important. It seems plausible that consistency information gains in importance with less serious effects.

Finally, those incidents judged moderately serious were the only incidents which resulted in external search.[17] This was true when both internal and external factors were assumed to be strong (83%) and when only internal was assumed to be strong (44%). This might be described as search for extenuating circumstances. The officers seemed satisfied that they understood many of these incidents but often sought "to give the kid a break." This occurs only with moderately serious offences as the officers believe that no excuse would do for serious incidents, and were unnecessary with the least serious offences. However, when the officers assumed the internal cause to be weak and the external strong they engaged in open search (59%). These offences were felt to be too serious to be adequately handled by this causal schema. When both were judged to be weak the officers engaged in open search in all cases, in large part, because they "just don't know what's going on."

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[16] When less serious effects are isolated Tau is .63.

[17] When moderate effects are isolated Tau is .40.

In summary, then, the data suggest the following hypotheses which should receive attention:

1. Attributors' preference for strong internal, weak external causal assumptions will be greater the more serious the effect.
2. Attributors' preference for strong internal, weak external causal attributions will be greater the more serious the effect.
3. For serious effects attributors will be most likely to engage in (open) search when the external cause is judged to be strong.
4. Attributors will be least likely to engage in information search for least serious effects.
5. Attributors will be most likely to engage in

external information search in cases of moderately serious effects.

Hypothesis Four: Multiple causal schemata will tend to be invoked when the internal cause is judged to be weak.

We have already suggested that the data may be taken as supporting this hypothesis: multiple cause schemata were invoked in every case. Thus, the hypothesis is true but trivial. Nevertheless, the related question of how officers dealt with causal imputations which were not their preference is important. We, therefore, use our data to examine the extent to which final imputations reflect the initial causal schemata invoked. Specifically, this involves an examination of the relationship between assumed causal schema and information received.

Table 11[18] presents data on this relationship. It appears that strong internal information was most likely to influence final causal attributions and that balanced causal assumptions were most likely to change, while strong internal assumptions, in combination with any other causal assumption, were most resistant to

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[18] Although the cell frequencies in this table are small, we nonetheless feel that the data are useful for generating hypotheses.

TABLE 11

FINAL CAUSAL ATTRIBUTION BY ASSUMED CAUSAL SCHEMATA AND STRENGTH OF INFORMATION RECEIVED (IN PERCENT) FOR ALL CASES IN WHICH STRONG INFORMATION WAS RECEIVED (N = 205)

		INFORMATION RECEIVED											
		Strong Internal ONLY				Strong Internal Strong External				Strong External ONLY			
		Assumed Causal Schemata*				Assumed Causal Schemata*				Assumed Causal Schemata*			
		S.I. W.E.	S.I. S.E.	W.I. S.E.	W.I. W.E.	S.I. W.E.	S.I. S.E.	W.I. S.E.	W.I. W.E.	S.I. W.E.	S.I. S.E.	W.I. S.E.	W.I. W.E.
	N =	(51)	(15)	(21)	(24)	(21)	(14)	(9)	(5)	(15)	(20)	(6)	(4)
Final Causal Attribution	S.I. W.E.	100	53	31	88	38	0	0	40	20	0	0	0
	S.I. S.E.	0	47	60	0	43	100	44	40	80	90	0	0
	W.I. S.E.	0	0	0	0	0	0	44	0	0	10	100	100
	W.I. W.E.	0	0	9	12	19	0	12	20	0	0	0	0
	Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

*S.I. - Strong Internal; W.I. - Weak Internal; S.E. - Strong External; W.E. - Weak External change (τ= .60).[19] First, we examine the final causal imputations which resulted from the various causal schemata when the information received indicated both strong internal and strong external factors. As we would expect, the causal assumption of strong internal, strong external was simply reinforced by such information and resulted in every case in a "strong, strong" imputation. On the other hand, as an inspection of the table will show, all other causal schemata changed in the direction of the information received in at least 50% of the cases.

It is particularly interesting to note that when the assumed causal schema was "weak, weak," the officers changed their final imputation to strong internal, weak external in 40% of the cases. This suggests that in order to deal with a balanced causal schema (with which the officers were least comfortable), the officers gave more weight to information they received on internal factors.

It is significant that causal assumptions that gave greater weight to either internal or external factors resisted change most. In some cases, however, these original assumptions appear to have been affected by the information received in a rather surprising way. When the original causal schema gave greater weight to internal factors and the information received was strong on both internal and external factors, the officers arrived at "weak, weak" attributions in 19% of the cases. This was true of 12% of the cases when the initial assumption was weak internal, strong external.[20] These instances seem to represent cases in which the officers were "confused" by what they found. This is illustrated in the following incident. An officer interrupted a fight between John and Paul. The officer "knew" that John was a fighter and that Paul "never bothered anybody." However, the information the officer received from all the witnesses was that although John, as everyone would expect, had thrown the first punch, this occurred only after considerable harassment from Paul. The witnesses told the officer that John had been in a surly mood earlier in the day. The officer finally concluded that it must have been "a bit of both." The implication seems to be that he felt it was possible that too great a weight was being given to either John's disposition or Paul's harassment. Not knowing which to discount, he reduced both.

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[19] Tau is .26 for the relationship between information received and final causal attribution. For the relationship between causal assumption and final attribution Tau is .24.

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[20] Since these figures represent a total of nine cases our discussion must be speculative.

Table 11 also presents data on the final causal attributions resulting from the various causal schemata when information received was "strong internal." The central pattern which emerged from these data was that strong internal information seemed to be used to resolve the difficulties the officers felt when their assumptions suggested a balance between internal and external factors. When they assumed both factors were strong, they changed their final imputation to strong internal, weak external in 53% of the cases. When both factors were assumed to be weak, the officers settled on a strong internal, weak external imputation in 88% of the cases.

Predictably, this strong internal information simply reinforced the strong internal, weak external causal schema. On the other hand, when the officers received strong internal information they never held to the weak internal, strong external causal schema. In 60% of the cases they "added" this information on strong internal factors to arrive at a final strong, strong imputation. In 31% of the cases they completely reversed their original assumption, arriving at their preferred causal imputation--strong internal, weak external. It appears clear that strong internal information carries a good deal of weight in the officers' search for a causal attribution. In many cases, the officers were willing to modify or change their original assumptions in light of this information.

The data seem to indicate that external information does not have the same force. Although this information was significant in changing weak internal, weak external causal schemata, officers rarely used this information to resolve the balance between strong internal and strong external assumptions (10%). When the officers had assumed strong internal, weak external factors, they either "added" the strong external information (80%), or dismissed it (20%). In no case did they deny their original assumption of strong internal factors.

The other possible combinations of information received produced no significant effects on the assumed causal schemata.

In summary, we suggest that the following hypotheses are worthy of test:

1. Strong internal causal assumptions (in combination with any other causal assumption) are least likely to be affected by information received.
2. Balanced causal schemata (strong, strong; weak, weak) are most likely to be affected by received information.
3. Strong internal information will be more likely

to produce a reduction in the strength of external causal assumptions than will strong external information be likely to produce a reduction in the strength of internal causal assumptions.

Although the number of cases dealt with in this investigation did not allow us to control here for seriousness of offence and confidence of attribution, it is clear that these are important factors. Our guess is that causal attributions will be made with the greatest confidence when no information is received which calls into question the initial causal schema invoked. We put this in the negative since it seems clear that highly confident attributions are made when no information is received supportive of the original causal schema. In addition, we suspect that the most confident attributions will be made when the information received concerns strong internal factors and the original causal schema was strong internal, weak external. Furthermore, we would suggest that the most confident attributions will be made when attributors receive information which indicates that the incident is either extremely serious or quite minor.

CHAPTER IV

ATTRIBUTIONAL PROCESSES: CONCLUSION

In the first chapter we argued that attribution theory could be of fundamental importance to interpretive sociology. An understanding of attribution would obviously contribute to an understanding of man's everyday interpretations. In the course of our research, it became evident that attribution theory would benefit substantially through considering the central postulates of interpretive sociology. In this chapter, we shall first consider the possible contributions of attribution theory to specific schools within the interpretive paradigm. We shall then consider the utility of the interpretive paradigm for the theoretical and methodological development of attribution theory as indicated by our data. Finally, we discuss what we feel to be some of the major contributions of the present study to social psychology in general.

Implications for Interpretive Sociology

It is ironic that those who have championed the quest for an understanding of interaction--the symbolic interactionists--have not dealt in detail with attributional processes. When they emphasize imputation of motives or intentions (Mead, 1934; Shibutani, 1961; Zakuta, 1970; Mills, 1940), they are concerned with fundamental attributional processes. Indeed, they have provided valuable descriptive material on the imputations that actors employ and the consequences of these imputations for interaction. They have not explored how these imputations are arrived at, despite their valuable arguments that these imputations arise out of interaction and that each new imputation involves at least some cognitive work (Blumer, 1969).

The value of attribution theory is most clearly evident for those interactionists concerned with labelling theory (Lemert, 1951, 1967; Becker, 1963, Erikson, 1966). Their explicit focus is on the attribution "deviant." Deviancy, they say, is a matter of social definition. The consequences of such an attribution are serious. Unfortunately, it is almost exclusively to the seriousness of these consequences that the labelling school has directed its attention. They have not investigated the processes involved in arriving at attributions of deviance.[1] This attention to the consequences of labels (while valuable) tells us nothing about the labelling process.

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[1] At least some preliminary work has been done to examine one aspect of the attributional process. Kitsuse

Furthermore, attribution theory would appear to have much to contribute to those sociologists who call themselves ethnomethodologists. To the extent that their language can be penetrated, they appear to be centrally concerned with how actors explain their worlds to themselves and others. This is precisely the concern of attribution theory. The major spokesman for ethnomethodology, Harold Garfinkel, seems to understand the importance of assumed causal schemata and the search for, and processing of, information. This seems to be what he is referring to when he discusses "patterns" and "indices." To Garfinkel (1967), "anomie" seems to mean the way an actor feels when he has received information which seems overwhelmingly to contradict the assumptions he holds at the highest level of generality. Garfinkel demonstrates in numerous experiments and case studies that "pattern" and "index" are inextricably interrelated and that men can be made to feel anomic. We agree. Attribution theory provides a conceptual apparatus for exploring

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(1962) and Schur (1972), for example, in their discussions of "retrospective interpretation" and Becker (1963) and Hughes (1945) in their discussion of "master status" explore the ways in which the assumptions about a person direct information search and processing.

these relationships.[2]

A further reason for our concern with attribution theory follows from another point that the ethnomethodologists repeatedly make. The ethnomethodologists insist that sociologists, like all men, are in the business of explaining their worlds to themselves and others. This involves making imputations, inferring inner states, labelling, and categorizing. Cicourel (1964) and Garfinkel (1967) warn us to treat sociology as a product, as data. The warning would be more constructive if appended to it was an understanding of how, in fact, men make attributions. Attribution theory is general enough in its concern and formulation that the activities of the social scientist are not excluded from its purview. This means that the social scientist is a man and his theorizing should apply to himself as well as to his "subjects."

Summary and Implications of Findings

Our investigation of attribution processes in a natural setting leaves us with the conclusion that much of the conceptual work done by Kelley is, in fact, useful for the consideration of attributional processes in general. However, the more complex data we have gathered suggest a number of refinements and point to a number of issues for future study.

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[2] The degree to which these sociologists, somewhat surprisingly, take for granted the attributional processes is illustrated by McHugh's (1970) work on deviance. In his attempt to understand how an actor comes to be labelled deviant, he fails to consider "unusual" as an attribution.

Kelley's basic concepts "distinctiveness," "consistency," "consensus" provide a parsimonious way of approaching the question of the relationship between information and attribution. While these concepts are obviously highly interrelated each type of information is necessary to the attributional processes. That these dimensions of information have independent as well as combined effects has been demonstrated in much experimental work (e.g. McArthur, 1972; Kelley, 1972a, 1972b, 1973.) We have shown that these concepts can be meaningfully applied in a field setting. We discovered that even though questions were not framed in terms of the concepts of "distinctiveness," "consistency," and "consensus," the officers tended to respond in terms of them. Indeed, while the researcher was careful to avoid the use of these terms, the officers frequently used either the concepts themselves or cognate terms. This finding is what one would expect given the fact that Heider (1944, 1946, 1958) and others have inductively derived these concepts from their observations of everyday actors' attributions. The correspondence between the theory's language and that of the actors provides additional warrant for our confidence in the construct validity of these central concepts.

Although the literature shows general agreement that the concepts "distinctiveness," "consistency," and "consensus" have independent and combined effects; we have shown, in addition, that these dimensions of information may be used differently at different stages of the attribution process. The meaning and significance of this point is made clear through the consideration of a key argument--attributors construct the stimulus to which they then react. This, of course, is the central tenet of the interpretive paradigm in sociology. Interpretative sociologists have long argued that action is primarily based on the context-bound meanings actors place on objects and events through their interaction with these stimuli. Man's responses to stimuli are mediated by a process of interpretation. Man constructs and recontructs the stimuli to which he responds.

Unfortunately, we did not begin our study with the "construction of stimuli" as an issue, since it is given no attention in the experimental work on attribution. We examined the attributions that officers made once the stimulus "incident" had been at least tentatively constructed. Nevertheless, our data reveal that despite the fact that the officers would often make immediate responses to "partial" stimuli, more often they engaged in "descriptive" information search to construct the stimulus as fully as possible. In short, the officers generally insisted that they had better know what it is they were to explain, before they arrived at their final explanation.

It is in this context that we can better understand the search for, and uses of, distinctiveness, consistency and consensus information. Distinctiveness information is used in the initial stages of the process to establish that an "incident," or more generally something worthy of explanation, has occurred. This is what we have referred to as establishing the appropriate level of abstraction. Once this has been established, distinctiveness information is used to "flesh out" the incident. Consistency and consensus information may then be used to further shore up confidence that the incident has occurred and that the reconstruction is faithful. Finally, distinctiveness, consistency, and consensus information is used to determine the "nature" of the incident. The importance of these kinds of information is supported by our finding that actors do tend to assume or search for all three, particularly distinctiveness. In addition, the confidence with which attributions are made is greater when high information is found or assumed on all of these categories. We are convinced that future investigation of attributional processes must attend to the construction of stimuli.

We can distinguish analytically three stages in the construction of the stimulus: (1) Has an incident occurred? (2) What was the incident? (3) What kind of incident is this? This final question involves attributors in a search for causes.

If the answer to the first question "Has an incident occurred?" is negative, then no further search or explanation is felt to be necessary. What this means simply is that the stimulus has been referred to a causal schema at a high level of generality. If the answer is affirmative, the attributor will want to know more about the incident. This descriptive search is particularly important in that there is often an explanation contained in the very description. In other words, the constructed stimulus may be referred to a causal schema which seems to provide a ready explanation.[3]

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[3] It is also possible that the attributor will

For example, when an officer described an incident as "That's just Johnny again," he seemed to be referring this to a causal schema worked out in past interaction with Johnny. In such a case, he may feel that no additional information is necessary or that perhaps some simple verificational information is all that is needed. On the other hand, this initial search may not result in a confident attribution. That is, the attributor may feel that his causal assumptions do not provide an explanation or, if they do provide one, it may be one that he feels uncomfortable with. We have found that not only do officers tend to give greater strength to internal factors in their causal assumptions, they also are more likely to feel that causal schemata which emphasize internal factors provide attributions with which they can feel confident. In fact, they are most likely to arrive at these causal attributions.

In summary, attention to the "construction of stimuli" emphasizes the following points:

1. Causal schemata are incorporated in assumptions at different levels of abstraction.
2. Attributors first must decide which level of abstraction is appropriate for any incident.

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reassess his tentative decision that an incident has occurred.

Under some conditions, information search may be directed more toward developing a better picture of what is involved than toward explaining it.

3. As there is a close relationship between the way an event is described and how it is explained, it is necessary to attend to the ways in which causal schemata interact with information assumed, sought, and received in constructing attributions.
4. In particular, attention should be directed to specifying the conditions resulting in various kinds of information search.

Depending on what causal assumptions attributors are operating with, they will engage in either directed or open search when they have not arrived at a satisfactory attribution. In Chapter Three we provide the following hypotheses which specify the conditions under which search is undertaken and under which each kind of search is more likely:

1. Attributors will be most likely to engage in information search when internal and external causal factors are assumed to be closely balanced.
2. Attributors will be most likely to engage in no search or simple verification search when they assume internal factors to be strong and external factors to be weak.

3. Attributors will be most likely to engage in open search whenever internal factors are assumed to be weak.

Attribution theory has underscored the importance of locus of causality. We too have found the distinction between external and internal causal attributions to be significant. However, our data have shown that they did not occur in pure form.

An attributor may feel satisfied that his assumptions handle the stimulus as constructed, in which case no further information search may be necessary. In some cases he may engage in simple verification search. On the other hand, causal assumptions are often invoked tentatively, in which cases search will produce information against which these assumptions can be tested. In our exploration of the impact of received information on initial causal assumptions we have provided hypotheses which indicate which assumptions are least and most resistant to change and what kinds of information are most likely to produce such change. These hypotheses are reproduced here:

1. Strong internal causal assumptions (in combination with any other causal assumption) are least likely to be affected by information received.
2. Balanced causal schemata (strong, strong; weak, weak) are most likely to be affected by received information.
3. Strong internal information will be more likely to produce a reduction in the strength of

> external causal assumptions than will strong external information be likely to produce a reduction in the strength of internal causal assumptions.

Finally, we have considered the attributor's evaluation of the seriousness of the effect and how this influences the assumptions he brings to bear on the incident, the kinds of search he engages in, and the kinds of attributions which result. Our hypotheses on seriousness of effect underscore the importance of considering the meaning that an attributor attaches to his own attribution. We reiterate these hypotheses here:

1. Attributors' preference for strong internal, weak external causal assumptions will be greater the more serious the effect.
2. Attributors" preference for strong internal, weak external causal attributions will be greater the more serious the effect.
3. For serious effects attributors will be most likely to engage in (open) search when the external cause is judged to be strong.
4. Attributors will be least likely to engage in information search for least serious effects.
5. Attributors will be most likely to engage in external information search in cases of moderately serious effect.

We have emphasized the processual nature of attributions. As well, we have emphasized that information means different things at different stages of the process, that attributors search for different things at different stages, and that attributors attach different meanings to the attribution itself. Finally, we emphasize that attributions are made in the context of assumptions at various levels of abstraction. We have provided hypotheses to guide future research. We urge that researchers exploit opportunities for investigating these questions in natural settings. In view of this recommendation, our findings on methodological techniques take on particular significance, since we attempted to devise techniques to enable us to treat attribution as process and to consider information search.

Notes on Methodology

No social scientist would argue against the value of a pre-test or pilot study. We argue that for the study of attribution, a stage of immersion and exploration is critical. This is particularly the case since it is essential to tap the assumptions made at the higher levels of generality. Since these assumptions are abstract and often taken for granted, they are infrequently verbalized in everyday interaction. Learning these assumptions involves, at least to some extent, learning the language and world view of the attributors. This knowledge is, of course, important to the researcher in a variety of ways: for framing questions, for understanding responses, and for establishing rapport.

While rapport is essential for the successful completion of most field studies, it takes on added importance in the study of attribution. Kelley has pointed out that attributions are likely to be affected when the attributor feels that his "subtlety and sophistication as an attributor are under evaluation" (Kelley, 1973:122). Rapport is one way in which observer influence may be minimized. Moreover, the use of informants may enable the researcher to assess the extent of observer influence.

More generally we urge that field researchers abide by the methodological dictum: maximization of data and techniques. Of the many useful techniques, one technique is invaluable in investigating attributions--unobtrusive observation. This allows the researcher to minimize observer influence and to check on the veracity of interview responses. In the present study, we were fortunate that the physical setting facilitated unobtrusive observation. In any case, sufficient time in the field and care in establishing rapport may allow the researcher to become "part of" the setting and, in this way, to achieve some of the benefits of unobtrusive observation.

Finally, we suggest that researchers, as far as possible, strive to record responses verbatim. This is essential since attribution theory is formulated from the attributor's point of view. It will not do for the researcher to assume that he knows what that point of view is. Verbatim accounts also protect against the effects of the researcher's infatuation with his hypotheses. These hypotheses are, after all, assumed causal schemata which may not only direct search, but may also influence what is seen, and, as our data show, preferred assumptions are highly resistant to change.

Conclusion

Actors make attributions in order to allow them to act upon and "understand" their worlds. Actors themselves frequently distinguish between "practical understanding" and "real understanding." That is, they differentiate between attributions upon which they can act but which do not "capture" the event, and attributions which give them the feeling that they "really understand." When attribution is viewed as process we often see actors using "working attributions" to allow them to make decisions while at the same time they may be engaged in a search for more adequate information. Thus, the correctional officers studied here would frequently make decisions based on what they themselves felt were insufficient grounds, but which were demanded by considerations other than understanding, for example, maintaining order. The consistent finding that neither internal nor external attributions were made in their pure forms attests to the sophistication of everyday actors in the attributions they make. This, of course, is not to suggest that their attributions are accurate, according to some objective measure, but that actors do see events as having complex causes. When these actors typified people and situations they often did so with the belief that these typifications were also simplifications. Often these typifications were considered useful for the practical purposes at hand. Certain typifications, however, were judged to be useful for providing a real understanding. In either case, no typifications were completely obdurate in the face of new information. Indeed, some typifications seemed to demand a search for new information.

It appears, then, that actors may use attributions which they are aware are insufficiently sophisticated. Social scientists should not take actors' attributions at face value when actors themselves do not.

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APPENDIX 1

SAMPLE CASE AND CODE SHEET

Staff	Boy	Incident	Information Sought (overt)
A.J.	Tom	Raised fist to officer (A.J.) If you let that kind of thing go too far the place gets out of hand. Probe: very serious Decision took immediate disciplinary action	Observed: To boy: What's got into you today? To J.K. (officer): Has he been acting up lately? To J.K.: What do you think got into him? Interview: reported same activities Explanation of Decision (Causal Schema) This kid's a trouble-maker - a real trouble-maker. Who knows what happened to trigger this? With this kid it could be anything.

Information Received

Observed:

From boy: mumbles - no answer

From J.K.: We're going to have to watch out for that kid. I've had my eye on him for a while now.

From B.L.: That one's got a temper.

Interview: reported same activities - added: you never get anything out of the boys.

Attributions

real trouble-maker

Confidence of Attribution

Probe: "I'm dead sure."

Explanation of Attributions (Assumed Information)

We'll get it out of him.
We've all had trouble with this kid before.
I don't like this kid - one of the worst.

No other kid would have done that for a harmless joke.
No surprise when you know the family.

All you have to do is see the file on this kid. Refers to
- repeated offences (break and enter)
- numerous charge sheets - many for violence
- "lousy family"

CODE SHEET

I. Kinds of Information Search

		Yes	No
A.	Distinctiveness	___	___
	Consistency	___	___
	Consensus	___	___
B.	Internal	___	
	External	___	
	Open	___	
	None	___	

II. Kinds of Information Assumed

	Hi	Low	None
Distinctiveness	___	___	___
Consistency	___	___	___
Consensus	___	___	___

III. Kinds of Information Received

		Hi	Low	None
A.	Distinctiveness	___	___	___
	Consistency	___	___	___
	Consensus	___	___	___
B.	Strong Internal	___		
	Strong External	___		
	Strong Both	___		
	Other	___		

IV. Kinds of Information Received and Assumed

	Hi	Low	None
Distinctiveness	___	___	___
Consistency	___	___	___
Consensus	___	___	___

CODE SHEET--Continued

V. Assumed Causal Schemata

Strong Internal/Strong External ____
Strong Internal/Weak External ____
Weak Internal/Strong External ____
Weak Internal/Weak External ____

VI. (Final) Causal Attribution

Strong Internal/Strong External ____
Strong Internal/Weak External ____
Weak Internal/Strong External ____
Weak Internal/Weak External ____

VII. Confidence in Attribution

Hi ____
Med ____
Low ____

VIII. Seriousness of Effect

Very serious ____
Moderately serious ____
Less serious ____

APPENDIX 2

FIFTEEN OFFICERS' RATING OF SERIOUSNESS OF INCIDENT

FIFTEEN OFFICERS' RATING OF SERIOUSNESS OF INCIDENT

Incident*	Very Serious	Moderately Serious	Less Serious
Swearing at an officer	13	2	0
Talking back to an officer	13	2	0
Threatening an officer	15	0	0
Striking an officer	15	0	0
Glue sniffing	14	1	0
Escaping	15	0	0
Repeated homosexual acts	15	0	0
Striking another boy	1	11	3
Discussing escape	1	11	3
Refusing to eat	1	10	4
Refusing to carry out orders	1	12	2
Homosexual act	3	12	0
Lying to an officer	1	14	0
Fighting resulting in injury	1	12	2
Fighting	0	5	10
Swearing	0	1	14
Bed wetting	0	0	15
Giving "butts" to non-smokers	0	0	15
Thumb sucking	0	0	15
"Impolite" behaviour	0	1	14
Cheating at games	0	0	15
Malingering	0	2	13

*These incidents represent the 400 recorded cases.